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Summary of Cotton Fiber and Processing Test Results

CROP of

1975



U.S. DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Cotton Division, May 1976

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SUMMARY OF COTTON FIBER AND PROCESSING TEST RESULTS CROP of 1975

INTRODUCTION

This report contains information on the fiber properties and spinning performance of cotton from major commercial production areas of the United States. Similar reports have been published annually since 1946. ^{1/} These reports summarize and add supplemental information to the data published in biweekly reports which were titled "Cotton Fiber and Processing Test Results, Crop of 1975" and numbered 1 through 12.

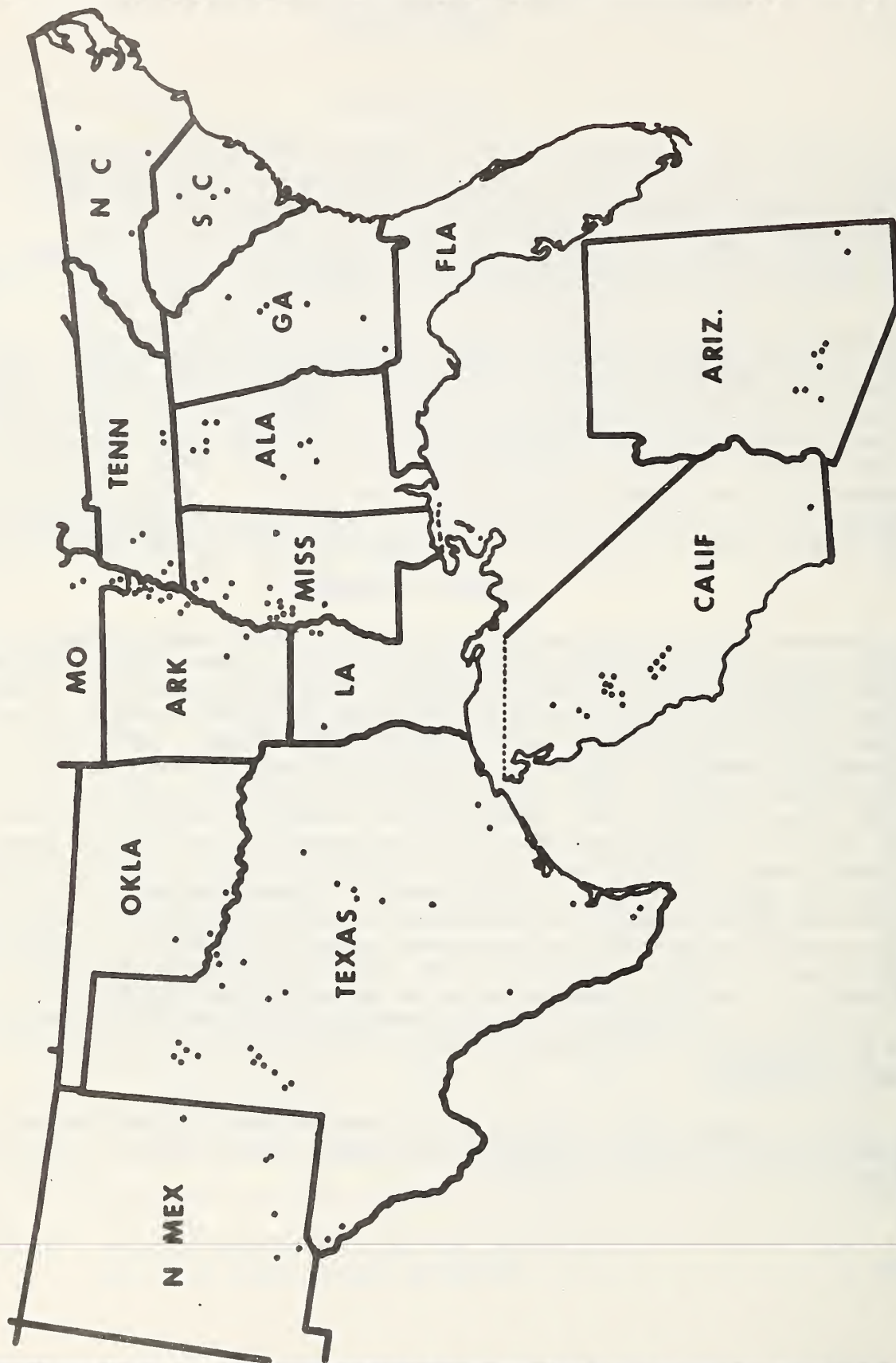
The results of fiber and spinning tests made in connection with these annual surveys provide data for studies of the relationships between fiber properties, processing performance and product quality. The data are used to measure the effectiveness of the standards to be sure that they continue to reflect differences in spinning utility. Publication of the bi-weekly reports enables merchants and manufacturers to use the results to locate sources of cotton to meet their specific requirements. Farmers and breeders may also use the data as a source of quality information regarding the various varieties of cottons produced under commercial growing conditions.

SAMPLING PROCEDURES

The procedure for selecting samples for the 1975 survey was designed to provide test lots representing all major varieties in each of the territories served by Cotton Division classing offices. Variety selections were based on the predominant varieties planted in each classing office territory as reported by the Cotton Division in "Cotton Varieties Planted, 1971-1975". A production area was selected to represent the leading variety and one to represent each of the other varieties with an expected production of 10,000 bales or more in each classing office territory. Additional areas were selected for those varieties with a production of over 150,000 bales. One additional production area was selected for each 150,000 bales or portion thereof in excess of the first 150,000 bales. Production areas with at least 70 percent of one variety were designated as that variety with no attempt made to maintain the purity of the variety except by selection of representative production areas. However, in some cases, where there was unusual interest in a particular variety and a low percentage was planted in the area, the classing offices selected lots representing 100 percent of the variety. The locations of the 129 production areas selected for the 1975 survey are shown on figure 1.

^{1/} Copies of past summary reports may be obtained from the Standardization Section, Cotton Division, AMS, USDA, 4841 Summer Avenue, Memphis, Tennessee 38122 until supplies are exhausted.

DISTRIBUTION OF PRODUCTION AREAS
FROM WHICH COTTON SAMPLES WERE TESTED, CROP OF 1975



U. S. DEPARTMENT OF AGRICULTURE

AGRICULTURAL MARKETING SERVICE

Figure 1. Location of production areas selected for the 1975 Survey.

Test lots were collected from each production area at intervals of three weeks during the harvest season. Lots were selected to represent the predominant grade and staple being classed at the time of collection. For the most part, these areas produce the specified qualities in quantities large enough to enable buyers to obtain lots of even-running grade and staple. Obviously, other qualities of cotton are available in each area as a result of normal seasonal, soil, harvesting and other variations. Most production areas also produce cotton of varieties other than those included in the tests.

Each spinning lot used in this study was made up of 20 to 30 samples of the same grade and staple length from bales classed for growers under the Smith-Doxey Act. These even-running lots of samples were then tested at Cotton Division fiber and spinning laboratories. While this method of collecting samples does not provide data for all qualities in the crop, it does provide average test results for those qualities in largest supply during each three-week period.

LABORATORY PROCEDURES

Fiber, spinning, and chemical finishing tests were performed under standardized procedures at the Cotton Division spinning laboratory at Clemson, South Carolina. Most of the fiber tests were performed in the standard atmospheric conditions of 65 percent relative humidity at a temperature of 70 degrees F. Standard test procedures as outlined by the American Society for Testing and Materials were used in making tests. Tests not covered by ASTM were performed using commonly accepted procedures as recommended by the instrument manufacturer. Five subsamples were taken at random from each spinning lot to provide representative specimens for the fiber tests.

Yarn processing or spinning tests were performed by a technique developed in the Cotton Division laboratories for processing small lots of cotton on standard-type textile machines. The samples in each lot were thoroughly composited by hand-mixing before being fed to the first process picker. This hand-mixing is similar to the machine mixing normally obtained in cotton textile opening equipment. Observations were made at each process to measure processing behavior and the yarns produced were tested to measure product quality.

On the basis of average past performance, cottons were grouped according to the expected staple length for the specified variety. All cottons of the specified variety were spun in the same manner regardless of difference in staple length. This was done so that direct comparisons of different lots of cotton within a specified variety could be made. These samples were

carded at specified production rates and spun into numbers that reflect the manufacturing values of the varieties tested. In general, the rates of carding and yarn numbers spun from the 1975 crop are as follows:

Group 1.--Short staple cottons, carded at 12-1/2 pounds per hour and spun into carded 8s and 22s yarns with a twist multiplier of 4.40 plus a carded yarn spinning potential test for all lots. This includes varieties which normally produce staple lengths 31/32 and shorter.

Group 2.--Medium staple cottons, carded at 9-1/2 pounds per hour and spun into carded 22s and 50s yarns with a twist multiplier of 4.00 plus a carded yarn spinning potential test for all lots. This group includes varieties which normally produce cottons from 1 inch through 1-3/32 inches in staple length.

Group 3.--Long staple cottons, carded at 6-1/2 pounds per hour and spun into both carded and combed 22s and 50s yarns with a twist multiplier of 3.80 plus a carded yarn spinning potential test for all lots. This group includes upland varieties which normally produce cottons from 1-1/8 inches through 1-1/4 inches in staple length.

Group 4.--Extra long staple cottons, carded at 4-1/2 pounds per hour and spun into combed 50s and 80s yarns with a twist multiplier of 3.60. This group includes all American Pima and American upland extra long staple varieties, which are usually 1-5/16 inches or longer in staple length.

Skeins of yarn from each spinning test lot were bleached and dyed by a technique developed in the Cotton Division laboratories for small scale finishing tests. Color tests were made on gray and chemically finished skeins of yarn as measures of the bleaching and dyeing behavior.

TEST RESULTS

U. S. Average - Upland Cotton

A total of 369 American upland spinning lots was tested from the 1975 crop, which includes short, medium and long staple cottons. This compares with 391 lots tested from the 1974 crop. Average fiber test results show the 1975 cottons to be slightly shorter, more uniform, finer and stronger at zero gage strength tests than in 1974. Shirley Analyzer nonlint content was slightly higher, while picker and card waste was lower in 1975. Yarns spun from these samples showed slightly stronger yarn strength with lower appearance grades and higher yarn imperfections. The average spinning potential yarn number was lower. (Table 1).

Group 1.--Short Staple Cottons

A total of 65 short staple American upland spinning lots was tested from the 1975 crop compared to 57 in 1974. Average fiber property results showed the 1975 cottons to be slightly shorter, more uniform, finer and stronger than the 1974 cottons tested. Both Shirley Analyzer nonlint content and picker and card waste were lower than a year ago. Yarns spun from these samples were stronger with higher appearance grades and fewer imperfections. The average spinning potential yarn number was higher.

Group 2.--Medium Staple Cottons

A total of 263 medium staple American upland spinning lots was tested from the 1975 crop compared to 299 lots from the 1974 crop. Average results showed 1975 cottons tested slightly shorter, more uniform and stronger at zero gage fiber strength than the 1974 cottons. Picker and card waste was lower than a year ago. Yarns spun from these samples were slightly stronger with lower appearance grades than the 1974 crop. Yarn imperfections were higher in the 1975 cottons. Average spinning potential yarn number was lower.

The Southeastern production area includes Virginia, North Carolina, South Carolina, Georgia and Alabama. A total of 44 medium staple spinning lots was tested in 1975 compared to 51 in 1974. Average results in 1975 showed these cottons significantly shorter, slightly less uniform, finer and stronger at zero gage strength than in 1974. Shirley Analyzer nonlint content was higher, while picker and card waste was lower. Yarns spun from these samples were weaker with lower appearance grades than the 1974 crop. Yarn imperfections were higher in the 1975 cottons. Average spinning potential yarn number was lower.

The South Central production area includes the states of Tennessee, Missouri, Mississippi, Arkansas and Louisiana. A total of 114 medium staple lots was tested from this area in 1975 compared to 128 in 1974. Average results in 1975 showed these cottons to be more uniform, coarser and stronger at both zero gage and 1/8" gage strength than in 1974. Picker and card waste was lower. Yarns spun from these samples showed slightly higher yarn imperfections than the previous year. Average spinning potential yarn number was lower.

The Southwestern production area consists of the states of Oklahoma and Texas except far west Texas (served by the El Paso classing office). A total of 36 medium staple American upland spinning lots was tested from the 1975 crop compared to 48 from the 1974 crop. Average results in 1975 showed these cottons to be shorter, less uniform, finer and weaker at both zero gage and 1/8" gage strength than the 1974 crop. Shirley Analyzer nonlint content was higher for the 1975 cottons, while picker and card waste was lower than a year ago. Yarns spun from these samples were slightly stronger, but yarn imperfections were higher than a year ago.

The Western production area consists of California, Arizona, New Mexico and far west Texas. A total of 69 medium staple lots was tested from this area in 1975 compared with 72 lots for the 1974 crop. Average results show 1975 cottons to be longer, less uniform, finer and stronger at both zero gage and 1/8" gage strength than in 1974. Both Shirley Analyzer nonlint content and picker and card waste were lower in the 1975 crop. Yarns spun from these samples were stronger with lower appearance grades than the 1974 crop. Yarn imperfections were greater in 1975. Average spinning potential yarn number was higher.

Group 3.--Long Staple Cottons

A total of 41 long staple American upland spinning lots was tested in 1975 compared to 35 lots in 1974. Average results show 1975 cottons to be shorter, slightly finer and stronger at zero gage strength than in 1974. Picker and card waste was significantly higher in 1975. Yarns spun from these samples show considerably higher yarn imperfections than a year ago. Average spinning potential yarn number was lower.

A total of 18 long staple American upland spinning lots was tested in 1975 from the Southeastern area compared to 15 lots in 1974. Average fiber test results from these long staple samples show 1975 cottons to be significantly shorter, coarser and stronger at zero gage strength. Shirley Analyzer nonlint content was lower, while picker and card waste was considerably higher than in 1974. Yarns spun from these samples were weaker with higher appearance grades. The 1975 cottons showed slightly fewer yarn imperfections than in 1974. Average spinning potential yarn number was much lower.

A total of six long staple American upland spinning lots was tested in 1975 from the South Central area, the same as in 1974. Average fiber test results showed the 1975 cottons to be significantly shorter, less uniform and stronger at zero gage strength than in 1974. Shirley Analyzer nonlint content was lower, while picker and card waste was higher than in 1974. Yarns spun from these samples showed higher appearance grades in 1975. Average spinning potential yarn number was lower in 1975.

A total of 17 long staple American upland spinning lots was tested in 1975 from the Western area compared to 14 lots in 1974. Average results show 1975 cottons to be finer and slightly weaker at 1/8" gage strength than in 1974. Both Shirley Analyzer nonlint content and picker and card waste were higher than in 1974. Yarns spun from these samples were considerably stronger with a lower appearance index. Yarn imperfections were significantly higher.

Group 4.--Extra Long Staple

A total of 15 extra long staple American Pima spinning lots was tested from the Western area compared with 19 lots tested in 1974. Average fiber test results show 1975 extra long staple cottons to be significantly longer, slightly coarser and stronger at both zero and 1/8" gage strength than 1974 cottons. Shirley Analyzer nonlint content and comber waste were higher than in 1974, while picker and card waste was lower. Combed yarns spun

from these samples were stronger with lower appearance grades. Yarn imperfections were slightly higher than in 1974.

Table 1.--Cotton: Average results of classification, fiber and processing tests from selected gin points, crops of 1974 and 1975

Area and Crop Year	Lots tested	Grade	Staple	Fiber test results					Processing test results					
				Fibrograph		Mike	Strength		Shirley Analyzer non- lint	Picker & Card Waste	Skein strength 22s	Appear- ance 22s	Yarn imperf. 22s	Spin. Potent.
				2.5% span	50/2.5 unif.		Zero gage	1/8" gage						
No.	Index	32d in	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	No.	
SHORT STAPLE - American upland														
Southwest														
1974	57	88	30.9	.96	44	3.8	83	21	4.0	7.3	90	91	27	40
1975	65	91	30.8	.95	45	3.6	85	22	3.9	6.6	98	106	20	43
MEDIUM STAPLE - American upland														
Southeast														
1974	51	91	34.5	1.09	45	4.3	81	22	3.4	6.5	102	103	19	61
1975	44	90	34.1	1.07	44	4.2	83	22	3.9	6.3	97	97	26	53
South Central														
1974	128	91	35.0	1.10	44	4.0	83	22	3.2	6.3	105	102	18	63
1975	114	92	34.8	1.10	45	4.3	85	23	3.2	5.7	105	101	21	59
Southwest														
1974	48	91	33.6	1.07	44	4.0	84	23	3.3	6.5	100	87	24	57
1975	36	91	33.5	1.05	43	3.7	83	22	3.7	6.2	103	88	32	56
West														
1974	72	95	35.1	1.10	46	4.5	91	25	2.5	6.0	115	103	16	66
1975	69	97	35.3	1.12	45	4.1	92	26	2.3	5.5	123	93	23	69
Average														
1974	299	92	34.7	1.10	44	4.2	85	23	3.1	6.3	106	100	19	63
1975	263	93	34.6	1.09	45	4.2	86	23	3.1	5.8	108	97	23	60

Table 1.--Continued

Area and Crop Year	Lots tested	Grade	Staple	Fiber test results					Processing test results					
				Fibrograph		Mike	Strength		Shirley Analyzer non- lint	Picker & Card Waste	Skein strength 22s	Appear- ance 22s	Yarn imperf. 22s	Spn. Potent.
				2.5% span	50/2.5 unif.		Zero gage	1/8" gage						
LONG STAPLE - American upland														No.
Southeast														
1974	15	90	35.1	1.15	43	4.0	82	23	4.0	8.7	104	104	21	67
1975	18	87	34.2	1.09	43	4.2	85	23	3.7	9.6	91	110	19	54
South Central														
1974	6	92	35.5	1.15	44	4.0	85	23	4.0	8.8	105	102	19	65
1975	6	89	35.3	1.11	43	4.0	88	23	3.8	9.2	104	110	19	62
West														
1974	14	94	36.6	1.16	45	3.7	93	27	2.7	7.4	128	96	20	89
1975	17	98	36.5	1.16	45	3.3	93	26	3.1	8.7	138	82	39	89
Average														
1974	35	92	35.8	1.15	44	3.9	87	24	3.5	8.2	114	101	20	75
1975	41	92	35.4	1.12	44	3.8	89	24	3.5	9.1	113	99	28	69
U. S. UPLAND AVG.														
1974	391	91	34.2	1.08	44	4.1	85	23	3.2	6.6	104	99	20	60
1975	369	92	34.0	1.07	45	4.0	86	23	3.3	6.3	107	98	23	58
EXTRA LONG STAPLE - American Pima														
West														
1974	19	4	44.1	1.44	32	3.5	100	32	2.9	8.0	64	110	2	18.0
1975	15	3	44.3	1.47	32	3.6	104	34	3.2	7.4	67	107	3	18.4
													Comber Waste	
													50's Combed Yarn	
													2	

Table 2.--Cotton: Average results of classification, fiber tests, and carded yarn processing tests by state for American upland samples from selected gin points, crops of 1974 and 1975

Area state and crop year	Spinning lots tested	Classification		Fiber length		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer non- lint	Color of raw stock			Picker & card waste	Spinning Potential	
		Grade		Staple	2.5% span		50/2.5 unif.	Zero gage			1/8" gage	Gray- ness	Yellow- ness			Com- posite
		No.	Index													
SOUTHEAST																
Medium staple:																
Alabama																
1974	26	91	34.4	1.09	45	4.3	83	23	6.6	2.9	2	3	97	6.0	63	
1975	21	91	33.9	1.06	44	4.0	83	23	6.8	3.3	3	3	96	5.8	54	
Georgia																
1974	13	89	34.2	1.07	44	4.4	79	21	6.5	3.9	3	3	95	7.1	54	
1975	12	84	33.9	1.07	45	4.4	80	21	6.5	4.6	3	3	92	7.4	52	
North Carolina																
1974	6	90	35.3	1.11	45	4.1	80	22	6.4	4.4	2	3	98	7.3	66	
1975	6	91	34.8	1.08	46	4.4	87	22	5.8	4.0	3	3	93	7.1	50	
South Carolina																
1974	6	93	35.0	1.12	45	4.4	81	21	6.4	3.8	2	3	99	6.4	63	
1975	5	98	34.6	1.08	45	4.5	84	22	6.1	2.0	2	3	99	4.9	55	
Long staple:																
Alabama																
1974	3	85	35.0	1.15	43	3.5	82	24	7.3	4.8	2	3	97	8.9	80	
1975	6	85	33.7	1.08	41	3.9	84	22	6.6	3.9	3	3	93	9.4	53	
Georgia																
1974	6	91	34.7	1.15	42	4.2	83	23	6.7	4.1	2	3	98	9.0	62	
1975	6	87	34.2	1.08	44	4.4	86	23	6.2	4.0	4	3	91	10.0	51	
North Carolina																
1974	3	94	35.7	1.15	43	3.9	82	22	6.4	3.7	2	3	99	8.3	65	
1975	3	83	35.0	1.11	44	4.4	87	23	5.6	3.8	4	3	88	9.7	54	
South Carolina																
1974	3	91	35.7	1.14	43	4.2	79	22	6.7	3.3	3	3	96	8.4	66	
1975	3	94	35.0	1.12	44	4.2	83	22	5.7	2.6	3	2	96	8.9	60	
SOUTH CENTRAL																
Medium staple:																
Arkansas																
1974	38	92	35.1	1.11	44	4.0	84	22	6.9	3.2	2	3	98	6.3	64	
1975	33	93	34.9	1.11	45	4.5	85	23	6.5	3.0	2	3	100	5.4	58	
Louisiana																
1974	18	90	34.7	1.10	44	4.4	82	22	6.9	3.0	3	2	95	6.2	61	
1975	9	95	34.9	1.11	44	4.1	84	23	6.9	2.6	2	2	100	5.5	63	
Mississippi																
1974	51	90	34.9	1.09	44	4.1	84	23	6.7	3.4	2	2	97	6.7	63	
1975	45	91	34.9	1.10	45	4.3	86	23	6.4	3.3	2	2	97	5.9	60	
Missouri																
1974	12	93	35.1	1.11	43	3.8	81	22	7.2	2.5	2	3	99	5.8	65	
1975	12	92	34.8	1.10	45	4.3	83	22	6.8	3.1	2	3	98	5.5	57	
Tennessee																
1974	9	93	35.0	1.10	44	3.9	82	22	7.0	2.8	1	3	100	6.0	67	
1975	15	90	34.3	1.05	45	4.1	83	22	6.6	3.4	2	3	95	5.9	56	

Table 2.--Continued

Area state and crop year	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn			
		22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	No.	Index	Rd	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
SOUTHEAST																
Medium staple:																
Alabama																
1974	26	104	35	6.3	4.4	104	82	16	13	84.5	3.2	103	27.4	25.9	103	
1975	21	99	31	6.0	4.2	94	71	27	22	85.9	3.3	106	27.6	25.6	101	
Georgia																
1974	13	94	30	5.9	4.1	106	81	18	14	83.8	3.1	102	27.5	25.9	103	
1975	12	93	30	5.5	3.9	98	77	25	20	85.4	3.2	105	27.4	25.3	100	
North Carolina																
1974	6	109	38	6.5	4.7	98	83	29	18	84.6	3.2	103	26.7	25.9	104	
1975	6	96	29	5.2	3.5	105	75	25	18	83.9	3.4	101	27.8	25.3	100	
South Carolina																
1974	6	103	34	6.3	4.5	98	77	22	16	85.1	3.1	105	26.6	26.3	106	
1975	5	100	32	5.5	3.9	98	70	20	16	84.6	3.0	104	27.7	25.5	101	
Long staple:																
Alabama																
1974	3	115	40	6.8	5.2	97	70	21	18	83.9	3.7	100	26.8	25.9	104	
1975	6	92	28	5.2	3.9	103	77	22	16	87.4	3.1	110	27.2	25.5	102	
Georgia																
1974	6	101	33	6.0	4.5	103	78	22	16	84.0	3.2	102	27.2	26.1	104	
1975	6	86	27	4.8	3.6	115	83	17	13	85.1	3.4	104	28.3	25.2	98	
North Carolina																
1974	3	103	34	6.2	4.4	107	73	23	18	83.3	3.1	101	27.7	25.8	102	
1975	3	94	30	4.9	3.6	103	80	25	18	84.4	3.1	103	28.9	25.2	97	
South Carolina																
1974	3	100	32	6.0	4.3	110	83	16	13	85.5	3.2	106	27.3	26.6	106	
1975	3	98	29	5.3	3.8	120	83	13	12	86.0	2.9	108	28.1	25.5	100	
SOUTH CENTRAL																
Medium staple:																
Arkansas																
1974	38	105	35	6.5	4.6	100	77	18	14	84.8	3.2	104	27.1	25.9	103	
1975	33	104	34	5.8	4.3	101	75	20	15	85.1	3.1	105	26.6	26.3	106	
Louisiana																
1974	18	98	32	6.1	4.2	111	86	17	13	84.3	3.1	103	26.8	26.1	105	
1975	9	111	37	6.4	4.7	99	78	22	17	85.6	3.1	106	27.1	25.9	103	
Mississippi																
1974	51	106	35	6.4	4.5	102	81	18	13	84.3	3.1	103	27.3	25.9	103	
1975	45	106	36	6.1	4.4	101	80	21	16	85.3	3.1	106	27.0	26.0	104	
Missouri																
1974	12	106	36	6.9	4.8	99	74	18	14	84.2	3.3	102	27.0	25.9	104	
1975	12	100	32	5.8	4.2	102	79	18	15	85.4	3.2	106	26.7	26.6	107	
Tennessee																
1974	9	109	37	7.0	4.8	103	79	18	15	84.9	3.4	103	26.4	25.9	105	
1975	15	101	32	6.0	4.3	104	83	21	16	85.0	3.3	104	27.3	26.0	104	

Table 2.--Cotton: Average results of classification, fiber tests, and carded yarn processing tests by state for American upland samples from selected gin points, crops of 1974 and 1975--Continued

Area state and crop year	Spinning lots tested	Classification		Fiber length		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer non- lint	Color of raw stock			Picker & card waste	Spinning Potential
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Gray- ness	Yellow- ness	Com- posite		
SOUTH CENTRAL (Continued)															
Long staple:															
Mississippi															
1974	3	91	36.0	1.15	44	4.1	87	23	6.1	4.4	2	3	9.3	63	
1975	3	90	37.0	1.15	43	3.8	89	24	5.6	4.1	2	2	8.8	69	
Tennessee															
1974	3	94	35.0	1.14	43	3.9	83	23	7.2	3.5	1	3	8.4	67	
1975	3	88	33.7	1.07	43	4.3	86	22	6.7	3.5	3	3	9.7	55	
SOUTHWEST															
Short staple:															
Central Texas															
1974	15	87	30.4	.95	44	4.2	87	20	5.8	3.5	4	4	7.1	38	
1975	15	95	32.0	1.01	45	4.4	88	23	5.9	3.0	2	4	5.7	46	
Northwest Texas															
1974	33	88	30.9	.96	44	3.5	81	21	6.5	4.3	3	4	7.4	41	
1975	38	90	30.3	.94	45	3.4	84	21	6.5	4.0	2	4	6.8	42	
Oklahoma															
1974	9	88	31.4	.99	44	4.4	82	21	6.3	3.4	3	4	7.2	40	
1975	9	90	31.2	.98	44	3.7	83	21	6.7	3.8	2	4	6.4	46	
Medium staple:															
South Texas															
1974	21	95	33.8	1.08	45	4.4	84	23	6.2	2.6	2	3	5.7	63	
1975	12	92	34.2	1.08	45	4.3	81	22	6.9	2.9	2	3	4.7	60	
Central Texas															
1974	9	87	33.4	1.05	43	4.1	85	21	6.3	3.5	4	3	6.7	50	
1975	9	95	33.9	1.07	44	4.2	82	22	6.5	3.0	1	3	4.7	56	
Northwest Texas															
1974	18	88	33.3	1.07	42	3.5	85	23	6.5	4.1	2	3	7.4	54	
1975	15	88	32.7	1.02	41	2.9	86	23	6.3	4.7	2	3	8.2	52	
WEST															
Medium staple:															
Arizona															
1974	26	93	35.1	1.10	44	4.7	85	23	6.3	2.9	2	2	6.2	58	
1975	15	99	35.1	1.10	44	4.4	86	24	6.7	2.4	1	3	5.7	57	
California															
1974	43	96	35.3	1.11	47	4.3	96	27	5.6	2.2	1	3	5.8	72	
1975	54	97	35.4	1.12	46	4.0	94	27	5.9	2.3	1	3	5.4	72	
Long staple:															
New Mexico															
1974	10	94	36.7	1.16	45	3.6	92	26	6.0	2.6	2	2	7.4	88	
1975	12	97	36.3	1.16	45	3.3	93	26	6.0	3.3	0	2	8.8	89	
West Texas															
1974	4	94	36.5	1.17	45	4.0	95	27	5.5	2.8	2	2	7.4	88	
1975	3	98	37.0	1.17	44	3.3	94	25	5.7	2.7	1	2	8.2	91	

Area state and crop year	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn				
		22s or 27 tex	Lbs. 50's	22s or 27 tex	Pct. 50's	22s or 27 tex	Index 50's	22s or 27 tex	Index 50's	22s or 27 tex	Second number	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
SOUTH CENTRAL (Continued)																	
Long staple:																	
Mississippi																	
1974	3	104	33	5.8	4.2	103	80	18	15	84.3	3.1	103	26.7	26.0	104		
1975	3	114	40	5.5	4.4	103	77	22	17	86.2	3.0	108	27.2	25.7	102		
Tennessee																	
1974	3	107	35	6.3	4.6	100	73	19	14	85.2	3.4	104	26.4	25.9	105		
1975	3	93	28	5.1	3.6	117	90	17	13	87.0	3.1	110	27.0	26.0	104		
SOUTHWEST																	
Short staple:																	
Central Texas																	
1974	15	86	282	5.6	6.6	99	121	18	27	82.9	3.5	98	28.3	25.4	99		
1975	15	103	328	6.1	7.1	117	127	11	20	86.4	3.3	107	26.8	26.8	108		
Northwest Texas																	
1974	33	93	305	6.7	7.6	87	108	31	51	83.2	4.1	97	28.2	24.9	97		
1975	38	96	301	6.3	7.4	104	123	20	41	83.8	3.5	100	26.9	25.4	102		
Oklahoma																	
1974	9	88	293	6.2	7.1	91	118	28	45	83.5	3.6	99	27.5	25.3	100		
1975	9	99	306	6.6	7.9	107	123	17	38	83.3	3.2	100	25.8	26.0	106		
Medium staple:																	
South Texas																	
1974	21	105	37	6.1	4.4	96	80	17	14	83.1	3.2	100	27.3	26.3	104		
1975	12	103	35	6.0	4.6	102	82	23	18	86.5	3.2	108	27.1	26.5	106		
Central Texas																	
1974	9	86	27	5.4	4.0	82	68	24	20	82.3	3.7	96	28.5	25.4	99		
1975	9	102	33	5.9	4.2	93	74	20	17	86.0	3.1	107	27.2	26.5	105		
Northwest Texas																	
1974	18	102	34	6.4	4.7	79	66	33	28	84.4	3.6	101	28.4	24.8	96		
1975	15	104	33	6.1	4.3	72	63	45	37	84.5	3.5	102	27.7	24.9	98		
WEST																	
Medium staple:																	
Arizona																	
1974	26	102	34	6.1	4.4	107	83	17	13	84.2	3.0	103	27.8	25.8	102		
1975	15	107	36	5.9	4.4	95	76	20	16	85.0	3.1	105	26.3	26.4	107		
California																	
1974	43	125	46	5.9	4.4	100	81	16	12	84.0	3.2	102	27.0	25.6	102		
1975	54	128	46	6.0	4.7	93	73	23	17	84.7	3.2	104	27.2	25.5	102		
Long staple:																	
New Mexico																	
1974	10	129	46	6.2	4.8	95	75	21	16	84.7	3.2	104	27.9	25.1	99		
1975	12	138	52	6.2	5.0	81	65	43	33	85.3	3.2	105	26.2	25.7	105		
West Texas																	
1974	4	126	45	6.0	4.7	100	80	18	12	83.8	3.1	102	28.2	25.2	98		
1975	3	141	52	5.9	4.8	83	70	31	26	84.0	3.2	102	26.6	25.7	104		

Table 3.--Cotton: Average results of fiber and carded yarn processing tests by grade and staple combinations for American upland samples from selected gin points, crop of 1975

Staple group, area, grade and staple		Spinning lots tested		Fiber length		Micro-naire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
Name	Code	32d in.	No.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Gray-ness	Yellow-ness	Com-posite	Pct.	No.
SHORT STAPLE GROUP															
Southwest															
Mid	31	32	3	1.00	44	4.5	90	22	5.8	2.3	1	4	102	5.7	42
M Lt Sp	32	32	6	1.01	45	3.9	86	22	6.2	2.9	1	4	101	5.3	48
SIM Lt Sp	42	29	8	.89	45	3.2	86	21	6.4	4.7	2	4	98	7.8	35
		30	6	.92	44	3.1	85	21	6.6	4.0	2	3	98	6.8	45
		31	9	.96	45	3.6	84	22	6.7	4.1	2	4	98	6.7	46
		32	4	1.02	44	3.6	81	22	6.7	4.0	2	4	97	5.8	50
		33	4	1.04	44	4.0	84	22	6.1	3.2	2	4	98	5.7	51
MEDIUM STAPLE GROUP															
Southeast															
SIM	41	33	4	1.00	43	3.9	81	22	7.2	3.3	2	3	98	5.6	43
		34	12	1.06	44	4.2	83	22	6.9	2.7	2	3	98	5.8	55
IM	51	34	7	1.09	45	4.4	81	22	6.5	4.4	3	3	92	7.0	51
		35	4	1.10	44	4.1	88	23	5.8	4.2	3	3	93	6.8	58
IM Lt Sp	52	34	4	1.06	45	4.2	82	21	6.3	5.2	4	3	90	7.8	54
South Central															
SIM	41	34	15	1.06	45	4.1	82	22	6.7	3.2	2	3	99	5.5	54
		35	56	1.11	45	4.4	85	23	6.6	2.8	2	3	100	5.4	60
		36	5	1.15	46	4.6	86	24	6.7	3.0	1	3	101	5.2	65
IM	51	34	13	1.06	44	4.0	85	22	6.1	4.1	3	3	91	6.9	58
		35	15	1.11	45	4.3	85	23	6.5	4.0	3	3	95	6.4	58
Southwest															
SIM	41	32	3	1.00	42	3.1	86	23	5.9	4.1	1	3	103	6.1	50
		33	3	1.03	39	2.8	85	22	6.5	4.1	1	3	101	7.9	46
		34	5	1.08	46	4.3	80	21	6.8	2.4	2	3	99	4.4	59
SIM Lt Sp	42	32	4	.99	43	2.9	84	22	6.5	4.1	2	4	100	7.9	53
		33	3	1.04	45	4.0	85	23	6.1	3.8	3	4	94	6.3	54
		34	4	1.07	46	4.6	84	21	6.8	2.9	3	4	94	4.8	58

Table 3.--Continued

Staple group, area, grade and staple	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn				Color 22s dyed yarn			
		22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite		
Name	Code	32d in.	No.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index	
SHORT STAPLE GROUP																	
Southwest																	
Mid	31	32	3	103	8s 333	5.9	8s 6.7	117	8s 123	13	88.1	3.1	112	26.7	26.8	108	
M Lt Sp	32	32	6	99	312	6.3	7.4	118	128	12	84.9	3.1	104	26.5	26.6	108	
SIM Lt Sp	42	29	8	92	290	6.1	7.1	106	122	21	83.3	3.6	99	27.3	25.0	100	
	30		6	100	309	6.4	7.5	98	118	24	83.8	3.9	99	27.2	24.8	99	
	31		9	99	311	6.7	7.9	110	126	16	84.7	3.4	103	26.8	25.8	104	
	32		4	102	317	6.7	8.0	98	122	22	83.4	3.4	100	26.2	25.8	105	
	33		4	103	315	6.2	7.6	110	125	14	83.6	3.2	101	26.0	26.2	107	
MEDIUM STAPLE GROUP																	
Southeast																	
SIM	41	33	4	91	26	5.9	4.1	92	70	26	86.8	3.5	108	27.6	25.6	101	
	34		12	100	31	6.1	4.2	104	79	19	84.2	3.3	102	27.6	25.6	101	
LM	51	34	7	94	30	5.4	3.8	90	67	34	88.1	3.0	112	27.2	25.5	102	
	35		4	102	34	5.6	3.9	85	62	35	83.2	3.1	101	28.0	25.5	100	
LM Lt Sp	52	34	4	95	31	5.4	3.9	102	80	28	86.2	3.3	107	26.9	25.5	102	
South Central																	
SIM	41	34	15	101	31	6.1	4.3	102	77	21	85.8	3.2	106	27.0	26.1	104	
	35		56	106	35	6.0	4.4	103	79	19	85.0	3.1	105	26.9	26.2	105	
	36		5	111	38	6.0	4.6	106	76	19	86.7	2.9	110	26.4	26.5	107	
LM	51	34	13	103	33	5.9	4.2	104	85	21	84.6	3.4	103	27.7	25.5	101	
	35		15	102	34	5.9	4.3	94	75	28	85.1	3.2	105	26.6	26.2	106	
Southwest																	
SIM	41	32	3	100	31	5.8	4.1	73	60	30	86.2	3.3	107	27.8	25.8	102	
	33		3	98	31	6.3	4.5	63	60	57	85.1	3.7	103	28.6	24.3	94	
	34		5	103	34	5.8	4.8	102	80	19	86.4	3.2	108	26.9	26.8	107	
SIM Lt Sp	42	32	4	103	33	6.2	4.3	75	65	41	84.2	3.4	102	27.2	25.3	101	
	33		3	104	33	5.8	4.7	97	77	23	84.8	3.2	104	27.3	25.3	101	
	34		4	99	32	5.7	4.1	110	85	22	85.4	3.3	105	27.3	26.7	106	

Table 3.--Cotton: Average results of fiber and carded yarn processing tests by grade and staple combinations for American upland samples from selected gin points, crop of 1975--(Continued)

Staple group, area, grade and staple		Spinning lots tested		Fiber length		Micro-naire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential	
		In.	No.	2.5% span	50/2.5 unif.		Pct.	Rdg.			Mpsi	G/tex	Pct.			Index	Gray-ness	Yellow-ness	Com-posite
Name	Code	32d in.	MEDIUM STAPLE GROUP (Continued)													
West	31	35	19	1.10	45	4.3	91	25	6.1	2.1	0	3	104	5.1	62	
		36	11	1.14	46	4.1	92	26	6.2	2.1	0	3	105	5.2	72	
	40	35	4	1.14	46	3.9	94	28	6.2	2.0	0	2	104	6.8	74	
		36	8	1.14	46	3.9	94	27	5.7	2.4	0	2	103	5.8	76	
SIM	41	35	13	1.11	45	4.0	93	27	6.0	2.5	1	3	101	5.6	73	
	36	8	1.12	46	4.0	94	27	6.1	2.6	1	2	2	102	5.3	73	
LONG STAPLE GROUP																
Southeast	42	34	4	1.08	43	4.2	86	22	6.6	4.4	3	3	93	9.8	51	
		51	34	3	1.09	42	4.2	83	23	6.5	4.0	3	3	92	10.1	51
West	31	36	7	1.15	44	3.3	95	27	5.8	2.3	0	2	105	8.0	87	
		37	4	1.18	45	3.6	94	26	5.9	2.2	0	2	104	7.1	88	

Table 3.--Continued

Staple group, area, grade and staple	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn						
		22s or 27 tex	Lbs.	22s or 27 tex	Pct.	22s or 27 tex	Index	22s or 27 tex	Second number	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite				
Name	Code	32d in.	No.	Lbs.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index				
MEDIUM STAPLE (Continued)																			
West	Mid	31	35	19															
		36		11	117	40	5.8	4.4	93	74	22	17	85.1	3.1	105	26.6	26.1	105	
							127	46	6.1	4.8	94	72	18	85.0	3.2	105	26.8	25.9	104
SIM+		40	35	4	129	48	5.9	4.8	90	72	20	15	103	84.2	3.1	103	26.8	25.2	101
		36		8	130	48	6.0	4.8	96	78	19	15	103	84.5	3.2	103	27.6	25.6	101
SIM		41	35	13	129	46	6.1	4.8	94	73	23	18	103	84.4	3.3	103	27.6	25.5	101
		36		8	129	47	6.0	4.7	92	74	23	16	104	85.0	3.2	104	27.4	25.4	101
LONG STAPLE GROUP																			
Southeast	SIM Lt Sp	42	34	4	84	27	4.8	3.7	108	80	24	17	111	88.1	3.3	111	28.1	25.2	99
	IM	51	34	3	91	27	5.0	3.7	113	77	16	13	110	87.5	3.2	110	27.0	25.9	104
West	Mid	31	36	7	136	50	6.1	4.9	89	67	33	26	104	84.8	3.2	104	26.3	25.8	105
		37		4	141	53	6.0	4.9	95	75	22	18	110	87.3	3.2	110	26.8	26.0	104

Table 4.--Cotton: Average of classification, fiber tests, and yarn processing tests by variety for samples from selected 100 percent one-variety gin points, crop of 1975

Processing group, variety, and state	Spinning lots tested	Classification		Fiber length		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer non- lint	Color of raw stock			Picker & card waste	Spinning Potential					
		Grade	Staple 32d in.	2.5% span	In.		Pct.	Zero gage			1/8" gage	G/tex	Pct.			Gray- ness	Yellow- ness	Com- posite	Index	Pct.
SHORT STAPLE																				
<u>Lankart 611</u> Central Texas Northwest Texas	3	93	31.0	.95		4.2	86	22	6.8	3.0	2	4	99	6.0	41					
	2	84	32.0	1.00		3.4	78	21	7.5	4.2	2	4	99	6.6	46					
<u>Lankart LX571</u> Central Texas Northwest Texas	3	94	32.7	1.04		4.7	92	24	5.7	3.1	2	4	100	5.5	51					
	6	90	32.3	1.03		3.5	85	23	6.5	3.6	2	4	97	5.7	53					
MEDIUM STAPLE																				
<u>Acala SJ-2</u> California	21	97	35.5	1.12		3.9	94	27	5.9	2.3	1	3	103	5.3	71					
<u>Acala SJ-3</u> California	6	97	35.3	1.12		4.2	93	27	6.0	2.4	1	3	103	5.7	73					
<u>Acala SJ-4</u> California	3	97	35.7	1.13		4.1	97	27	5.6	2.4	1	2	103	5.7	75					
<u>Auburn M</u> Missouri	3	91	34.7	1.10		4.1	83	21	6.8	3.3	2	3	98	5.8	59					
<u>Brycot #4</u> Arkansas	3	94	35.0	1.12		4.5	90	23	5.6	2.9	1	3	101	4.9	57					
<u>Coker 201</u> North Carolina	3	94	34.3	1.05		4.5	89	23	6.0	2.7	2	3	96	6.6	50					
<u>Coker 312</u> Northwest Texas	3	88	33.3	1.05		2.9	89	22	6.0	5.0	1	3	102	8.4	47					
<u>Coker 417</u> Alabama	3	88	35.0	1.11		3.9	90	24	5.8	3.3	3	3	96	5.8	67					
<u>Coker 5110</u> Northwest Texas	3	91	33.3	1.02		2.7	83	22	6.6	4.6	2	3	101	7.9	45					
<u>Deltapine 16</u> Alabama	3	94	34.0	1.06		4.1	80	22	7.7	3.0	2	3	99	5.7	57					
Arkansas	12	94	35.2	1.12		4.2	83	23	7.4	2.7	2	2	100	5.3	65					
Louisiana	6	95	35.0	1.11		4.0	83	23	7.3	2.4	1	3	101	5.3	68					
Mississippi	9	94	35.3	1.13		4.3	82	24	7.3	2.5	1	2	100	4.8	67					
Arizona	3	100	35.3	1.11		4.2	84	24	7.1	2.4	0	3	104	6.0	58					

Processing group, variety, and state	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn				
		22s or 27 tex	lbs.	Second number	Pct.	Index	22s or 27 tex	Second number	22s or 27 tex	No.	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite	Index
SHORT STAPLE																	
Lankart 611 Central Texas Northwest Texas	3 2	8s	328 311	8s 7.6 8.2	120 95	8s 127 120	8s 17 49	87.5 83.2	3.3 3.2	110 100	26.2 26.2	27.1 25.6	110 104				
Lankart LX-57 Central Texas Northwest Texas	3 6	344 317	7.0 7.8	120 108	130 123	9 18	14 40	85.3 83.0	3.4 3.4	104 99	27.7 25.7	27.2 26.2	107 108				
MEDIUM STAPLE																	
Acala SJ-2 California	21	127	46	6.0	4.7	88	69	26	20	85.5	3.2	106	27.2	25.4	101		
Acala SJ-3 California	6	128	46	6.2	4.8	100	75	19	15	84.1	3.2	102	27.4	25.6	102		
Acala SJ-4 California	3	130	48	5.7	4.7	100	83	14	12	84.4	3.1	103	27.4	25.5	101		
Auburn M Missouri	3	100	33	5.7	4.5	103	77	19	14	83.5	3.1	101	27.2	26.2	104		
Brycot #4 Arkansas	3	101	32	5.2	3.7	97	63	20	15	83.9	3.2	102	26.7	27.0	109		
Coker 201 North Carolina	3	98	28	5.3	3.5	120	87	11	9	84.2	3.6	101	27.5	25.2	100		
Coker 312 Northwest Texas	3	100	31	6.1	4.2	63	60	63	53	84.2	3.7	100	28.6	24.3	94		
Coker 417 Alabama	3	113	39	6.2	4.5	87	67	28	23	83.2	3.2	100	27.8	25.5	100		
Coker 5110 Northwest Texas	3	98	30	6.2	4.5	63	60	52	42	84.9	3.4	103	28.3	25.0	97		
Deltapine 16 Alabama	3	100	32	6.6	4.7	93	70	24	20	84.0	3.4	102	27.4	26.1	104		
Arkansas	12	111	37	6.5	4.8	105	82	17	14	85.0	3.0	105	26.6	26.2	105		
Louisiana	6	115	38	6.8	5.0	100	80	20	15	86.1	3.1	108	26.8	26.0	104		
Mississippi	9	113	38	6.8	4.9	104	80	18	14	87.5	3.0	111	26.7	25.9	104		
Arizona	3	106	36	5.9	4.4	90	70	26	21	85.6	3.3	105	27.1	26.1	104		

Table 4.--Cotton: Average of classification, fiber tests, and yarn processing tests by variety for samples from selected 100 percent one-variety gin points, crop of 1975--Continued

Processing group, variety, and state	Spinning lots tested	Classification		Fiber length		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer non- lint	Color of raw stock			Picker & card waste	Spinning Potential
		Grade	Staple 32d in.	2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Gray- ness	Yellow- ness	Com- posite		
MEDIUM STAPLE (Continued)															
<u>Deltapine 25</u> Mississippi	3	94	35.0	1.10	45	4.5	86	24	6.3	3.6	2	2	98	6.4	55
<u>Deltapine 55</u> Mississippi	3	93	35.3	1.14	44	4.0	86	23	6.4	2.8	2	2	98	6.5	65
<u>Deltapine 61</u> Arizona	6	100	36.5	1.12	44	4.4	86	24	7.1	2.2	0	3	104	5.4	61
<u>Deltapine 61</u> California	3	100	34.3	1.07	45	4.5	91	24	6.0	1.9	0	2	104	5.3	53
<u>Deltapine 45A</u> Mississippi	3	91	34.7	1.07	46	4.1	83	23	7.1	3.2	2	2	98	5.8	63
<u>Dixie King III</u> Georgia	3	80	33.7	1.02	45	4.3	84	21	6.1	5.2	5	3	83	7.9	51
<u>Dixie King III</u> Mississippi	3	85	34.0	1.07	46	4.2	90	23	5.8	4.5	3	3	93	7.0	65
<u>Lockett BXL</u> Northwest Texas	3	89	32.7	1.02	45	3.8	86	22	6.2	3.7	3	4	97	6.7	53
<u>Lockett 4789A</u> Northwest Texas	3	91	32.0	.98	42	2.5	85	22	6.6	3.6	1	3	103	7.6	53
<u>McNair 612</u> North Carolina	3	88	35.3	1.11	45	4.4	85	22	5.6	5.2	3	3	90	7.6	50
<u>Stoneville 7A</u> Arkansas	3	94	35.3	1.13	46	5.0	94	23	4.9	3.6	2	3	100	5.8	52
<u>Stoneville 213</u> Arkansas	15	93	34.7	1.10	45	4.5	84	23	6.3	3.3	2	3	99	5.5	54
<u>Stoneville 213</u> Louisiana	3	94	34.7	1.10	44	4.4	85	22	6.1	3.0	2	2	98	5.7	54
<u>Stoneville 213</u> Mississippi	12	88	34.8	1.10	45	4.4	85	22	6.1	3.8	3	3	92	6.3	57
<u>Stoneville 213</u> Missouri	3	98	34.7	1.08	45	4.3	83	21	6.4	2.0	1	3	101	4.7	56
<u>Stoneville 213</u> Arizona	3	98	34.7	1.09	44	5.0	87	23	5.8	2.4	1	3	103	6.2	48
<u>Stoneville 256</u> Mississippi	3	91	34.7	1.11	45	4.7	93	22	5.0	3.0	2	2	97	6.2	52
<u>Stoneville 603</u> Alabama	3	92	33.0	1.02	41	3.5	81	23	7.0	4.1	2	3	96	7.4	44
<u>Stoneville 731N</u> Mississippi	3	90	35.0	1.11	46	4.8	93	23	5.4	3.5	2	2	98	6.5	53
<u>Tamcot SP37</u> Central Texas	3	91	32.3	1.02	42	3.4	87	23	5.4	4.9	1	3	102	6.3	48

Table 4.--Continued

Processing group, variety, and state	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn				Color 22s dyed yarn			
		22s or 27 tex	Lbs.	Second number	Pct.	22s or 27 tex	Index	Second number	22s or 27 tex	No.	Index	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
MEDIUM STAPLE (Continued)																	
<u>Deltapine 25</u> <u>Mississippi</u>	3	106	34	5.9	4.2	103	77	26	20	84.7	3.1	104	28.2	26.0	102		
<u>Deltapine 55</u> <u>Mississippi</u>	3	113	44	6.4	4.9	90	73	25	22	84.7	3.1	104	27.1	25.8	103		
<u>Deltapine 61</u> <u>Arizona</u> <u>California</u>	6 3	110 108	39 35	6.1 5.6	4.7 4.1	98 103	80 80	19 25	15 16	85.3 83.8	3.0 3.0	106 103	26.0 26.5	26.7 26.0	109 105		
<u>Deltapine 45A</u> <u>Mississippi</u>	3	112	39	6.7	4.9	93	83	21	15	86.5	2.9	109	26.8	25.9	104		
<u>Dixie King III</u> <u>Georgia</u> <u>Mississippi</u>	3 3	92 113	28 39	5.4 5.7	3.7 4.4	113 100	93 80	16 22	12 18	85.9 84.3	3.6 3.3	105 102	28.2 27.6	24.9 25.8	97 102		
<u>Lockett BXL</u> <u>Northwest Texas</u>	3	105	34	5.9	4.1	93	70	23	19	83.3	3.0	101	26.3	25.8	105		
<u>Lockett 4789A</u> <u>Northwest Texas</u>	3	103	33	6.2	4.4	63	60	50	42	85.5	3.6	104	27.2	24.9	99		
<u>McNair 612</u> <u>North Carolina</u>	3	93	29	5.2	3.5	90	63	38	27	83.5	3.2	101	28.1	25.5	100		
<u>Stoneville 7A</u> <u>Arkansas</u>	3	98	30	4.7	3.5	100	70	19	15	85.5	3.1	106	26.9	26.5	106		
<u>Stoneville 213</u> <u>Arkansas</u>	15	100	32	5.6	4.1	99	74	23	17	85.2	3.2	105	26.5	26.3	106		
<u>Louisiana</u>	3	104	33	5.7	4.2	97	73	26	21	84.7	3.2	104	27.8	25.9	102		
<u>Mississippi</u>	12	102	33	5.9	4.2	97	78	24	17	84.3	3.2	103	26.8	26.0	105		
<u>Missouri</u>	3	100	32	5.8	4.1	97	77	18	16	85.8	3.2	107	26.7	26.4	106		
<u>Arizona</u>	3	101	31	5.3	3.8	93	80	19	16	83.6	3.1	101	26.9	26.0	104		
<u>Stoneville 256</u> <u>Mississippi</u>	3	99	29	5.2	3.6	113	87	11	10	85.4	3.2	105	27.1	26.1	104		
<u>Stoneville 603</u> <u>Alabama</u>	3	90	26	5.9	4.1	83	63	33	26	85.3	3.6	104	27.8	25.2	99		
<u>Stoneville 731N</u> <u>Mississippi</u>	3	100	32	5.1	3.6	93	73	32	23	84.5	3.2	103	27.0	26.9	107		
<u>Tamcot SP37</u> <u>Central Texas</u>	3	98	30	5.5	3.9	80	60	24	21	86.1	3.2	107	27.8	26.3	103		

Table 4.--Cotton: Average of classification, fiber tests, and yarn processing tests by variety for samples from selected 100 percent one-variety gin points, crop of 1975--Continued

Processing group, variety, and state	Spinning lots tested	Classification		Fiber length		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer non- lint	Color of raw stock			Picker & card waste	Spinning Potential
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Gray- ness	Yellow- ness	Com- posite		
No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.	
LONG STAPLE															
Acala 1517-V	3	91	37.0	1.19	46	3.3	90	26	6.3	5.6	1	3	101	11.1	92
New Mexico															
Coker 310	3	86	33.3	1.07	42	3.7	84	22	6.9	3.8	3	3	94	8.5	55
Alabama	6	87	34.2	1.08	44	4.4	86	23	6.2	4.1	4	3	91	10.0	51
Georgia	3	94	35.0	1.12	44	4.2	83	22	5.7	2.6	3	2	96	8.9	60
South Carolina	3	90	37.0	1.15	43	3.8	89	24	5.6	4.1	2	2	99	8.8	69
Mississippi															
EXTRA LONG STAPLE															
Pima S-4	6	4	44.7	1.49	32	3.7	106	34	7.2	3.6	3	5	92	7.1	
Arizona															

Processing group, variety, and state	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprftns		Color 22s bleached yarn			Color 22s dyed yarn		
		22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s on 27 tex	Second number	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
No.	<u>Lbs.</u>	<u>Lbs.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Index</u>	<u>Index</u>	<u>Index</u>	<u>No.</u>	<u>No.</u>	<u>Rd</u>	<u>+b</u>	<u>Index</u>	<u>Rd</u>	<u>-b</u>	<u>Index</u>
LONG STAPLE															
<u>Acala 1517-V</u> New Mexico	3	141	53	6.4	5.2	67	60	67	51	84.2	3.3	102	26.1	25.6	104
<u>Coker 310</u> Alabama	3	94	29	5.3	4.1	107	83	22	15	87.1	3.1	110	27.2	25.6	102
<u>Georgia</u> South Carolina	6	86	27	4.8	3.6	115	83	17	13	85.4	3.4	104	28.3	25.2	98
<u>Mississippi</u>	3	98	29	5.3	3.8	120	83	13	12	86.0	2.9	108	28.1	25.5	100
	3	114	40	5.5	4.4	103	77	22	17	86.2	3.0	108	27.2	25.7	102
EXTRA LONG STAPLE															
<u>Combed Yarns</u>															
<u>Pima S-4</u> Arizona	6	71	37	5.4	4.6	108	113	2	2	81.6	3.2	96	26.0	26.6	108

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1975

State, Production Area, Chronological sampling and Classification				Digital Fibrograph			Micro- naire		Fiber strength		Elon- gation 1/8"		Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Name	Code	32d in.	2.5% span length	50/2.5 unif.	Rdg.	Mpsi	G/tex	Pct.	Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color	Pct.		
SOUTH WEST																		
CENTRAL TEXAS																		
BRANDON																		
LANKART 611																		
SLM	LT SP 42	31		0.95	48		4.2	87	23	6.1	2.6	3.3	2	4	99	6.4		
SLM	LT SP 42	31		0.95	46		4.2	87	22	6.6	2.1	2.9	2	4	98	6.0		
M	31	31		0.95	45		4.2	85	22	7.6	1.7	2.7	1	4	101	5.7		
COMMERCE																		
LANKART LX571																		
M	31	31		0.98	44		4.4	102	24	4.6	2.1	3.4	1	4	103	5.6		
M	31	31		1.01	45		4.6	91	22	5.5	1.6	2.4	1	4	102	5.7		
M	31	31		0.98	44		4.7	89	21	5.5	1.3	2.0	1	4	102	6.1		
TAYLOR																		
LANKART 57																		
SLM	LT SP 42	33		1.06	44		4.0	82	22	6.2	2.5	3.5	2	4	99	5.7		
SLM	LT SP 42	33		1.06	43		4.2	81	22	5.7	2.6	3.5	2	3	100	7.0		
SLM	LT SP 42	32		1.03	45		4.6	79	22	5.7	2.8	3.3	2	3	97	5.2		
WACO																		
LANKART LX571																		
SLM	41	33		1.03	46		4.4	92	24	5.4	2.9	4.0	2	4	100	5.8		
SLM	41	32		1.03	47		4.7	89	24	5.7	1.9	2.6	2	4	101	5.1		
SLM	41	33		1.06	48		5.0	94	24	5.9	1.9	2.6	2	4	98	5.5		
WAXAHACHIE																		
LANKART LX571																		
M	LT SP 32	32		1.01	45		3.7	87	22	5.6	1.9	2.7	1	4	102	5.3		
M	LT SP 32	32		1.00	46		4.4	88	21	5.8	2.0	2.9	1	4	102	5.1		
M	31	32		1.02	44		4.2	91	23	6.3	1.7	2.5	1	4	103	5.4		
NORTHWEST TEXAS																		
ANSON																		
LANKART 611																		
LM	LT SP 52	32		0.99	46		3.5	78	21	7.6	2.9	4.1	2	4	99	7.4		
SLM	LT SP 42	32		1.00	44		3.4	78	21	7.4	2.7	4.3	2	4	99	5.9		
BURKBURNETT																		
LANKART LX571																		
M	LT SP 32	32		1.02	45		3.9	87	23	6.5	1.6	2.6	2	4	99	5.2		
SLM	LT SP 42	33		1.02	45		3.8	87	23	6.3	1.8	2.5	2	4	97	4.8		
SLM	LT SP 42	33		1.01	44		3.9	84	23	6.2	2.2	3.2	2	4	97	5.2		

1/ Reduced from 42 because of bark

2/ Reduced from 32 because of bark

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1975

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State, Production Area Chronological sampling and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin- ning Poten- tial	Color - 22s gray yarn			Color-22s blechd.yarn			Color - 22s dyed yarn			
		8s or 7½ tex	22s or 27 tex	8s or 7½ tex	22s or 27 tex	8s or 22s or 7½ tex	22s or 27 tex	8s or 7½ tex	22s or 27 tex		Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite	
Grade	Staple	Lbs.		Pct.		Index		No.		No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index	
SOUTH WEST																				
CENTRAL TEXAS																				
BRANDON																				
100 PERCENT																				
SLM	LT SP 42	31	326	102	7.5	6.4	130	120	14	9	43	67.0	12.1	94	85.3	3.4	104	27.1	27.6	110
SLM	LT SP 42	31	314	100	7.7	6.5	120	120	20	11	41	67.6	11.9	94	85.4	3.5	104	26.9	27.3	109
M	31 31	344	96	7.5	6.1	6.1	130	120	18	6	40	72.4	11.5	102	91.8	2.9	122	24.6	26.5	111
99 PERCENT																				
COMMERCE																				
LANKART LX571																				
M	31 31	327	104	6.5	5.4	5.4	120	110	19	12	43	69.7	12.3	100	86.1	3.1	107	26.4	26.7	108
M	31 32	319	102	6.7	6.0	6.0	120	120	22	13	42	68.8	12.4	98	86.1	3.0	108	26.7	27.2	109
M	31 32	316	101	6.8	5.7	5.7	120	110	24	15	38	70.9	12.3	102	86.1	3.2	107	26.5	27.3	110
95 PERCENT																				
TAYLOR																				
LANKART 57																				
SLM	LT SP 42	33	302	100	7.5	6.3	130	110	24	11	52	66.3	12.3	93	84.7	3.1	104	25.1	26.1	108
SLM	LT SP 42	33	326	103	7.7	6.3	120	110	28	14	51	68.8	12.2	98	85.2	3.3	104	27.0	26.5	106
SLM	LT SP 42	32	320	103	7.5	6.3	130	110	23	14	52	69.0	11.5	96	84.8	3.5	103	26.8	26.0	104
100 PERCENT																				
WACO																				
LANKART LX571																				
SLM	41 33	343	105	7.0	5.8	5.8	130	120	14	8	49	69.9	12.1	99	85.0	3.5	103	27.9	26.9	106
SLM	41 32	344	108	6.8	5.6	5.6	130	120	16	10	48	69.4	11.9	98	85.6	3.4	105	27.8	26.5	104
SLM	41 33	345	113	7.1	6.4	6.4	130	120	13	8	55	67.0	11.6	92	85.2	3.3	104	27.4	28.1	112
99 PERCENT																				
WAXAHACHIE																				
LANKART LX571																				
M	LT SP 32	32	325	105	7.2	6.3	130	120	21	13	49	67.9	11.4	93	86.0	3.2	107	27.1	27.2	109
M	LT SP 32	32	311	98	7.0	5.9	130	120	16	9	41	67.7	11.9	94	86.1	3.3	107	27.8	26.8	106
M	31 32	363	107	6.6	6.0	6.0	130	120	23	10	46	69.4	12.0	98	92.0	3.2	121	26.8	26.0	104
100 PERCENT																				
NORTHWEST TEXAS																				
ANSON																				
LANKART 611																				
LM	LT SP 52	32	315	103	8.2	7.1	120	100	45	25	46	67.4	12.1	95	84.0	3.5	101	26.6	25.5	103
SLM	LT SP 42	32	307	95	8.3	7.0	120	90	53	26	45	66.2	12.4	93	82.5	2.9	100	25.9	25.8	105
100 PERCENT																				
BURKBURNETT																				
LANKART LX571																				
M	LT SP 32	32	297	92	7.2	6.0	130	120	23	11	51	65.0	11.7	87	85.0	3.0	105	26.3	26.4	107
SLM	LT SP 42	33	319	104	7.5	6.0	120	110	28	11	50	63.4	11.4	84	83.1	3.3	100	25.9	26.6	109
SLM	LT SP 42	33	313	102	7.8	6.0	130	110	35	18	50	65.0	11.8	88	81.4	3.1	196	25.8	25.6	105

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	Stage	32d in.	In.	Pct.		Mpsi	G/tex		Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.			Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST NORTHWEST TEXAS														
HART														
STRIPPER 31														
SLM LT SP 42	29	0.89		45	3.4	88	21	5.7	3.4	4.9	3	4	96	7.6 1/2
SLM LT SP 42	29	0.88		45	3.1	93	21	6.3	3.2	4.9	2	4	98	8.1 1/2
SLM LT SP 42	29	0.89		46	3.4	87	21	6.1	3.6	5.0	2	4	98	8.4 1/2
KRESS														
STRIPPER 32														
97 PERCENT														
M LT SP 32	28	0.85		46	3.8	87	19	6.1	1.5	3.0	2	4	100	7.3 1/2
SLM LT SP 42	31	0.96		42	2.8	94	22	6.0	2.5	4.1	2	4	99	7.1 1/2
SLM LT SP 42	29	0.94		44	3.0	87	23	6.1	3.0	4.1	2	4	99	7.6 1/2
LOOP														
PAYMASTER 18														
83 PERCENT														
SLM 41	29	0.86		46	3.7	86	20	5.8	1.6	2.9	1	3	103	6.8
M LT SP 32	29	0.86		45	3.8	84	20	6.1	1.3	2.6	1	3	102	7.1
SLM LT SP 42	29	0.92		45	2.8	81	22	7.2	2.1	4.0	2	4	98	7.2
LOOP														
STRIPPER 31														
75 PERCENT														
SLM LT SP 42	30	0.96		44	3.2	90	21	6.2	2.7	4.1	2	3	100	7.4
SLM LT SP 42	30	0.89		44	3.3	82	20	6.1	2.4	3.5	2	3	99	7.4
SLM LT SP 42	30	0.89		45	3.0	84	21	6.1	2.9	4.7	2	3	100	7.1
LORENZO														
PAYMASTER 909														
90 PERCENT														
SLM LT SP 42	30	0.93		44	3.0	87	23	6.9	2.3	3.8	3	3	96	5.7 1/2
SLM LT SP 42	31	0.93		43	2.9	80	21	6.8	2.7	4.3	3	4	95	7.0
SLM LT SP 42	30	0.93		44	2.7	85	22	7.1	2.7	4.5	3	4	95	6.9 1/2
OLNEY														
LANKART 57														
75 PERCENT														
M LT SP 32	32	1.00		46	4.0	83	22	6.4	1.8	3.0	1	3	103	5.1
M LT SP 32	31	0.99		44	3.9	80	21	6.8	2.3	3.1	1	3	103	6.0
M LT SP 32	32	0.98		44	3.9	86	22	6.2	2.2	2.9	1	4	102	5.5
PADUCAH														
LANKART 57														
75 PERCENT														
SLM LT SP 42	31	0.99		45	3.3	76	21	7.2	3.5	4.9	1	4	102	6.6
SLM SP 43	31	0.98		43	3.0	78	21	7.6	3.4	5.0	2	5	98	6.6
SLM SP 43	31	0.96		42	3.0	81	20	6.9	3.4	4.4	3	5	96	7.0

1/ Cotton stuck to processing rolls
2/ Reduced from 33 because of bark

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1975--Continued

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State, Production Area Chronological sampling and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin- ning Poten- tial	Color - 22s gray yarn			Color-22s blchd.yarn			Color - 22s dyed yarn		
			8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	Pct.	Index	Index	8s or 74 tex		22s or 27 tex	No.	Rd	+b	Index	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
Grade	Code	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	Index	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WEST NORTHWEST TEXAS																				
HART																				
STRIPPER 31																				
95 PERCENT																				
SLM LT SP	42	29	282	89	6.7	5.6	130	110	49	27	33	67.0	12.0	93	79.8	3.4	91	27.8	25.9	102
SLM LT SP	42	29	287	99	7.0	6.4	110	100	42	18	35	66.7	11.7	91	83.3	3.8	98	28.7	25.1	97
SLM LT SP	42	29	315	95	7.0	5.7	120	100	38	24	36	67.3	12.3	95	85.5	3.7	104	26.6	24.4	98
KRESS																				
STRIPPER 32																				
97 PERCENT																				
M LT SP	32	28	278	84	6.8	5.4	120	90	35	27	29	67.2	11.5	92	84.4	3.5	102	28.7	25.2	97
SLM LT SP	42	31	316	100	7.7	6.2	120	100	46	23	46	67.0	12.1	94	86.0	3.9	104	29.1	24.5	94
SLM LT SP	42	29	288	91	7.8	6.3	120	100	46	26	37	66.2	11.8	91	84.6	3.6	102	27.8	24.7	97
LOOP																				
PAYMASTER 18																				
83 PERCENT																				
SLM	41	29	270	78	6.5	5.5	130	110	33	12	33	71.4	11.0	98	83.8	3.8	99	28.3	25.5	99
M LT SP	32	29	275	84	6.2	5.4	130	110	26	15	26	70.6	11.5	99	85.8	3.7	104	26.8	25.5	102
SLM LT SP	42	29	306	98	7.4	6.4	110	100	56	28	37	62.9	11.4	83	81.9	4.0	94	26.3	25.2	102
LOOP																				
STRIPPER 31																				
75 PERCENT																				
SLM LT SP	42	30	312	108	7.8	6.8	120	110	42	16	51	66.1	10.9	87	84.1	4.4	97	28.4	24.6	96
SLM LT SP	42	30	300	97	7.4	6.0	120	110	51	25	42	68.7	11.8	96	86.4	3.9	105	27.8	24.4	96
SLM LT SP	42	30	306	93	6.9	5.5	110	90	47	29	37	65.7	11.7	89	83.4	3.4	100	25.9	25.4	104
LORENZO																				
PAYMASTER 909																				
90 PERCENT																				
SLM LT SP	42	30	313	98	7.5	6.3	120	100	51	19	49	68.3	12.2	97	84.5	4.1	100	28.3	25.1	98
SLM LT SP	42	31	310	96	7.6	6.4	130	120	31	16	48	63.5	11.3	84	83.6	4.0	98	27.8	23.9	94
SLM LT SP	42	30	319	105	8.4	7.6	120	90	60	22	48	63.2	11.4	84	82.3	3.9	95	27.0	24.1	96
OLNEY																				
LANKART 57																				
75 PERCENT																				
M LT SP	32	32	309	100	7.7	5.9	130	120	20	14	48	71.4	11.0	98	85.1	2.9	106	26.4	26.1	106
M LT SP	32	31	313	103	7.9	6.8	120	120	25	11	51	67.2	11.0	90	84.1	3.1	103	25.9	26.7	109
M LT SP	32	32	316	101	7.4	6.5	130	120	21	9	46	67.0	11.8	93	83.5	2.8	102	26.1	25.7	105
PADUCAH																				
LANKART 57																				
75 PERCENT																				
SLM LT SP	42	31	307	98	9.1	8.0	130	100	37	15	49	68.7	12.0	97	87.2	3.2	110	26.6	25.6	103
SLM SP	43	31	323	110	8.3	6.7	120	90	69	34	50	62.4	13.0	86	85.4	3.2	105	25.2	25.9	107
SLM SP	43	31	305	96	8.1	6.7	120	90	64	30	45	62.2	12.8	85	83.3	3.1	101	25.9	25.0	102

1/ Reduced from 33 because of bark

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling and Classification		Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			
Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color	Picker & Card waste
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST													
NORTHWEST TEXAS													
PLAINVIEW													
PAYMASTER 18													
SLM LT SP 42	28	0.85	45	3.1	85	20	6.4	2.7	4.3	3	4	96	7.8 1/2
SLM LT SP 42	29	0.87	45	3.1	81	20	6.5	2.3	7.4	2	4	98	7.6 1/2
LM 51	30	0.93	43	3.0	84	21	6.8	3.5	5.0	2	3	98	7.5
LANKART LX571													
100 PERCENT													
M LT SP 32	32	1.03	45	3.3	86	22	6.8	1.8	3.4	2	4	98	5.7
LM LT SP 52	32	1.05	44	3.0	79	23	6.8	4.7	5.8	3	4	95	7.5
SLM LT SP 42	32	1.04	43	3.3	85	23	6.6	2.5	4.0	3	4	95	6.0
SILVERTON													
PAYMASTER 18													
75 PERCENT													
SLM 41	31	0.88	47	4.3	88	21	6.2	1.8	3.0	1	3	101	6.8
SLM 41	30	0.87	47	3.7	83	20	6.7	3.9	5.4	1	3	101	6.6
SLM LT SP 42	30	0.91	46	3.4	81	21	7.0	2.0	3.1	2	4	97	6.2
TULIA													
STRIPPER 31													
95 PERCENT													
SLM LT SP 42	28	0.84	46	3.6	88	20	5.7	2.4	3.7	2	3	100	6.8
SLM LT SP 42	29	0.88	45	3.6	85	21	6.2	1.8	2.7	2	4	98	7.9
SLM LT SP 42	29	0.86	45	3.2	83	21	6.7	3.1	4.6	3	4	95	8.7
Cotton stuck to processing rolls													
Reduced from 41 because of bark													
Reduced from 42 because of bark													
Reduced from 32 because of bark													

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area Chronological sampling and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin- ning Poten- tial	Color - 22s gray yarn			Color-22s bichd.yarn			Color - 22s dyed yarn		
Grade	Staple		8s or 7 1/4 tex	22s or 27 tex	8s or 7 1/4 tex	22s or 27 tex	8s or 7 1/4 tex	22s or 27 tex	8s or 7 1/4 tex	22s or 27 tex		Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
Name	Code	32d in.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WEST NORTHWEST TEXAS PLAINVIEW																				
PAYMASTER 18																				
75 PERCENT																				
1/	SLM LT SP	42 28	273	81	7.1	5.8	120	100	36	15	31	67.2	11.6	92	84.8	4.1	100	29.2	24.6	94
	SLM LT SP	42 29	290	92	7.5	6.8	130	120	33	16	36	67.1	11.3	91	84.1	3.5	101	26.9	25.1	101
	LM	51 30	299	96	7.0	6.2	120	90	50	20	42	66.3	11.3	89	83.4	3.6	99	26.7	24.6	99
100 PERCENT																				
LANKART LX571																				
RULE																				
	M LT SP	32 32	314	97	8.0	7.0	120	110	44	18	56	63.3	11.5	84	83.5	3.5	100	25.1	27.1	112
2/	LM LT SP	52 32	332	110	8.3	7.4	120	100	55	27	57	62.7	11.7	83	81.9	3.6	96	25.4	25.6	106
3/	SLM LT SP	42 32	326	106	8.0	6.8	120	100	56	24	54	62.9	11.9	84	83.1	3.6	98	25.8	26.2	107
SILVERTON																				
PAYMASTER 18																				
	SLM	41 31	289	95	7.0	6.0	120	110	29	12	42	70.1	10.3	94	83.4	4.2	97	27.8	25.4	100
	SLM	41 30	285	89	7.0	5.5	120	110	32	14	36	67.2	11.2	91	81.8	3.2	97	26.2	27.3	111
	SLM LT SP	42 30	302	97	7.0	6.5	120	90	65	31	42	64.2	11.6	86	82.2	3.5	97	25.6	25.3	104
95 PERCENT																				
TULIA																				
STRIPPER 31																				
	SLM LT SP	42 28	278	81	6.9	5.5	120	110	20	12	30	70.0	12.0	99	83.6	3.4	100	27.4	25.9	103
	SLM LT SP	42 29	272	87	6.3	5.8	130	110	32	14	31	67.9	12.1	96	84.7	3.6	102	27.2	25.0	100
	SLM LT SP	42 29	276	88	6.8	6.0	130	110	39	18	32	67.7	11.9	94	82.6	3.5	98	27.1	24.7	99
Reduced from 41 because of bark																				
1/	Reduced from 42 because of bark																			
2/	Reduced from 32 because of bark																			

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1975 -Continued

State, Production Area, Chronological sampling and Classification				Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8".	Shirley Analyzer		Color of raw stock			Picker & Card waste		
Grade	Code	Staple	32d in.	2.5% span length	50/2.5 unif.		In.	Pct.		Rdg.	Mpsi	G/tex	Pct.	Visible waste		Total waste	Gray- ness	Yellow- ness	Composite color
Name												Pct.			No.	Index	Pct.
SOUTH WEST																	
OKLAHOMA																	
CORDELL																	
95 PERCENT																	
LANKART 57																	
SLM LT SP 42		31	0.94		45			3.8	83	21	6.6						
SLM LT SP 42		32	1.00		43			3.1	83	22	7.1		4.3	3	4		95
SLM LT SP 42		31	0.98		43			3.3	82	22	6.3		4.3	2	4		98
												2.5	3.5	3	4		96
DAVIDSON																	
90 PERCENT																	
LANKART 57																	
SLM LT SP 42		31	0.94		44			3.8	82	21	7.5						
SLM LT SP 42		31	0.96		45			3.8	83	21	6.8		4.8	2	4		97
LM LT SP 52		31	0.99		45			3.7	85	23	6.2		4.9	2	4		97
												3.6	4.6	3	5		95
TERRAL																	
95 PERCENT																	
LANKART 57																	
SLM 41		32	1.01		45			4.1	81	21	6.8						
SLM 41		31	1.00		44			4.0	82	20	6.8		2.0	1	3	101	5.3
M LT SP 32		31	0.98		44			4.0	84	20	6.4		1.6	2	4	101	5.7
												1.4	2.8	2	4	101	5.0
NEW MEXICO																	
PORTALES																	
80 PERCENT																	
RILCOT 90																	
SLM LT SP 42		29	0.88		43			2.5	86	21	6.1						
SLM LT SP 42		28	0.80		45			2.6	85	19	6.4		6.1	2	3	99	9.6 3/
SLM LT SP 42		28	0.84		46			2.7	85	21	6.6		6.4	2	4	100	9.1 3/
												4.2	9.0	2	4	97	9.6 3/

1/ Reduced from 42 because of bark
2/ Reduced from 31 because of bark
3/ Cotton stuck to processing rolls

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area Chronological sampling and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprftns.		Spin- ning Poten- tial	Color - 22s gray yarn			Color - 22s bichd. yarn			Color - 22s dyed yarn				
			8s or 7 1/4 tex	22s or 27 tex	8s or 7 1/4 tex	22s or 27 tex	8s or 7 1/4 tex	22s or 27 tex	8s or 7 1/4 tex	22s or 27 tex		Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite		
Grade	Staple		Ibs.	Ibs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index		
SOUTH WEST																						
OKLAHOMA																						
CORDELL																						
95 PERCENT																						
LANKART 57																						
SLM	LT	SP	42	31	309	99	7.9	7.2	130	120	27	14	47	64.9	11.7	87	84.3	3.6	101	26.3	25.4	103
SLM	LT	SP	42	32	316	104	8.1	6.8	120	90	49	23	50	63.5	11.4	84	83.0	3.6	98	26.2	25.4	103
SLM	LT	SP	42	31	309	99	8.6	6.6	120	110	42	26	52	64.2	12.1	87	83.4	2.9	102	25.7	25.2	103
DAVIDSON																						
90 PERCENT																						
LANKART 57																						
SLM	LT	SP	42	31	302	100	7.4	6.5	130	100	37	14	44	64.3	11.7	86	83.6	3.4	100	26.0	26.4	108
SLM	LT	SP	42	31	304	98	8.0	6.2	120	100	40	18	43	64.3	11.7	86	83.7	2.9	103	25.6	26.6	109
LM	LT	SP	52	31	311	102	8.8	7.2	120	110	50	24	47	63.6	12.4	87	82.7	3.1	99	25.5	26.4	109
TERRAL																						
95 PERCENT																						
LANKART 57																						
SLM		41	32	304	94	7.6	6.4	130	110	30	13	44	67.8	11.5	93	81.9	2.9	98	25.1	26.1	108	
SLM		41	31	302	99	7.4	6.3	120	110	33	11	45	66.7	11.7	91	83.7	3.0	102	26.0	26.6	108	
LM	LT	SP	32	31	300	92	7.5	5.9	120	110	32	13	41	66.8	11.8	92	83.5	3.3	100	25.8	25.5	104
NEW MEXICO																						
PORTALES																						
80 PERCENT																						
RILCOT 90																						
SLM	LT	SP	42	29	298	96	7.0	6.3	120	70	91	51	38	69.6	11.8	98	84.9	3.9	101	27.2	24.5	98
SLM	LT	SP	42	28	289	97	7.3	6.5	90	60	162	84	30	63.6	11.8	85	84.1	3.6	101	26.5	25.3	102
SLM	LT	SP	42	28	292	88	6.7	5.6	90	60	152	84	30	63.5	12.2	86	83.9	3.4	101	26.0	25.5	104

1/ Reduced from 42 because of bark

2/ Reduced from 31 because of bark

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975

State, Production Area, Chronological sampling, and Classification		Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH EAST													
ALABAMA													
GREENBRIER													
STONEVILLE 213													
SLM	41	34	1.04	45	4.6	80	21	6.6	1.9	2.5	3	95	4.9
SLM	41	33	1.02	45	4.2	79	22	7.5	2.2	2.8	2	97	4.3
SLM	41	33	0.97	43	4.0	82	22	7.1	1.8	2.6	2	100	4.2
HUNTSVILLE													
DELTAPINE 16													
SLM	41	34	1.08	44	4.1	80	22	7.6	2.4	3.3	2	98	5.0
SLM	41	34	1.08	43	4.2	80	22	7.6	1.9	2.9	2	98	6.0
SLM	41	34	1.03	43	4.0	81	22	7.9	1.9	2.9	1	102	6.1
MERTONVILLE													
STONEVILLE 603													
SLM	41	33	1.02	41	3.8	83	23	6.7	2.5	3.8	3	96	6.4
SLM	41	33	1.01	42	3.5	81	23	7.7	2.6	4.1	2	97	7.5
SLM LT SP	42	33	1.04	41	3.2	79	22	7.7	3.1	4.5	2	96	8.2
MONTGOMERY													
DELTAPINE 16													
LM	51	34	1.09	45	4.4	82	23	6.4	3.5	4.5	4	87	7.1
SLM	41	34	1.08	45	4.3	77	23	7.8	2.1	3.1	2	97	5.1
SLM	41	34	1.08	44	4.3	82	22	7.1	2.3	3.1	2	98	5.8
MOUNDVILLE													
COKER 201													
LM	51	34	1.10	44	4.6	86	24	5.9	3.2	4.3	4	89	6.9
LM	51	34	1.09	44	4.2	83	23	6.6	3.0	4.1	3	90	5.7
LM	51	33	1.06	42	4.0	81	22	5.5	2.0	3.1	4	86	5.9
PRATTVILLE													
COKER 417													
LM	51	35	1.11	45	4.0	91	24	5.9	2.8	3.6	3	95	5.3
SLM	41	35	1.12	44	4.0	89	24	5.5	1.9	2.9	3	96	5.4
LM	51	35	1.10	43	3.7	89	24	5.9	2.3	3.3	2	96	6.8
SCOTTSBORO													
DIXIE KING III													
SLM	41	34	1.05	45	3.7	87	22	6.8	1.4	2.3	2	100	4.5
SLM	41	34	1.07	44	4.0	84	22	6.8	1.6	2.5	3	95	5.1
SLM	41	34	1.07	43	4.0	82	22	6.5	1.5	2.2	2	98	6.2

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975

State, Production Area, Chronological sampling, and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin- ning Poten- tial	Color - 22s gray yarn		Color - 22s blchd. yarn		Color - 22s dyed yarn	
Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct- ance	Yellow- ness	Reflct- ance	Yellow- ness	Reflct- ance	Blue- ness
Name	Code	32d In.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index
SOUTH EAST																
ALABAMA																
GREENBRIER																
STONEVILLE 213																
SLM	41 34	95	28	6.1	4.1	100	80	25	21	51	67.2	11.5	92	86.3	3.4	107
SLM	41 33	94	26	6.0	3.8	100	70	28	25	49	69.0	10.2	91	91.7	3.1	121
SLM	41 33	90	27	6.4	4.2	100	80	21	19	41	68.2	11.1	93	85.2	3.5	104
HUNTSVILLE																
DELTAPINE 16																
SLM	41 34	103	34	6.5	4.5	90	60	22	20	60	67.2	11.1	90	83.3	3.6	99
SLM	41 34	102	30	6.8	4.6	100	80	22	18	56	69.2	10.4	92	84.2	3.2	103
SLM	41 34	95	32	6.5	4.9	90	70	28	23	55	71.3	10.1	96	84.5	3.3	103
MERIDIANVILLE																
STONEVILLE 603																
SLM	41 33	90	26	5.4	3.9	80	60	26	21	41	67.5	11.6	93	86.1	4.0	104
SLM	41 33	89	26	5.8	4.4	90	70	31	26	41	70.3	10.9	96	84.3	3.5	102
SLM LT SP	42 33	91	27	6.4	4.1	80	60	41	32	50	65.6	11.4	88	85.6	3.3	105
MONTGOMERY																
DELTAPINE 16																
LM	51 34	94	28	5.1	3.4	90	70	37	26	49	63.1	10.6	81	91.5	3.1	120
SLM	41 34	103	31	6.5	4.1	100	80	22	18	53	67.3	10.5	89	83.6	3.2	101
SLM	41 34	103	33	6.4	4.7	110	90	16	13	57	69.1	10.1	91	83.5	3.1	101
MOUNDVILLE																
COKER 201																
LM	51 34	91	30	4.9	3.8	90	60	49	36	54	65.0	10.9	85	90.3	3.0	118
SLM	51 34	96	29	5.6	3.7	80	60	45	33	53	62.5	10.6	80	92.9	3.1	123
LM	51 33	81	24	4.8	3.9	100	70	27	22	45	62.5	10.2	80	85.9	3.3	106
PRATTVILLE																
COKER 417																
LM	51 35	114	39	5.9	4.4	80	60	32	25	68	63.8	11.1	84	81.9	3.4	96
SLM	41 35	112	38	6.3	4.4	90	70	28	24	65	67.7	10.5	89	84.1	3.3	102
LM	51 35	114	40	6.3	4.6	90	70	24	19	69	67.0	10.3	88	83.7	2.9	103
SCOTTSBORO																
DIXIE KING III																
SLM	41 34	110	35	6.4	4.1	110	80	12	11	59	67.2	10.9	90	84.8	3.4	103
SLM	41 34	98	33	5.8	4.4	100	80	18	14	59	67.1	10.7	89	84.0	3.4	101
SLM	41 34	104	32	5.9	4.4	110	80	19	17	60	68.3	10.3	90	85.9	3.1	107

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification		Digital Fibrograph		Micro- naire		Fiber strength		Elon- gation 1/8"		Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	Code	2.5% span length	50/2.5 unif.	Rdg.	Mpsi	Zero Gage	1/8" Gage	Pct.	Pct.	Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color	
Name	32d in.	In.	Pct.				G/tex	Pct.	Pct.			No.	No.	Index	Pct.
SOUTH EAST GEORGIA ALLENTOHNS															
COKER 201															
LM	51	34	1.07	45	4.4	81	21	6.7	3.4	4.5	4.5	3	3	93	8.1
LM	51	34	1.09	44	4.2	82	22	6.9	4.4	5.5	5.5	3	3	92	8.1
LM	51	34	1.06	45	4.4	77	22	6.6	3.4	4.2	4.2	2	2	99	7.2
BOSTWICK															
DIXIE KING III															
100 PERCENT															
LM LT SP 52	34	1.03	46	4.2	86	21	6.8	4.4	4.4	5.4	5.4	4	3	87	7.2
LM LT SP 52	34	1.03	46	4.4	83	22	5.5	3.3	3.3	4.3	4.3	5	4	82	7.5
LM LT SP 52	33	1.01	44	4.4	82	20	5.9	4.7	4.7	5.9	5.9	5	3	81	8.9
DONALSONVILLE															
DELTAPINE 16															
75 PERCENT															
SLM LT SP 42	34	1.09	44	4.3	74	21	7.3	3.9	3.9	5.1	5.1	2	3	96	7.8
LM LT SP 52	34	1.10	43	4.2	78	21	6.7	4.6	4.6	5.6	5.6	3	3	94	8.5
LM LT SP 52	34	1.09	44	4.1	79	20	6.2	4.8	4.8	5.5	5.5	2	3	96	7.9
NORMAN PARK															
COKER 201															
98 PERCENT															
SLM LT SP 42	34	1.09	45	4.6	79	22	6.2	2.0	2.0	2.9	2.9	3	3	95	6.1
SLM	41	1.07	45	4.6	79	22	6.1	2.2	2.2	3.0	3.0	3	3	95	6.5
LM	51	1.10	45	4.5	79	22	6.7	2.8	2.8	3.6	3.6	2	2	97	5.6
NORTH CAROLINA															
LAURINBURG															
MCNAIR 612															
100 PERCENT															
SLM	41	1.14	46	4.3	83	22	5.7	4.6	4.6	5.5	5.5	3	3	90	7.7
LM	51	1.11	46	4.4	85	22	5.6	3.6	3.6	5.0	5.0	4	3	88	7.9
LM	51	1.09	44	4.4	86	23	5.6	4.1	4.1	5.1	5.1	3	3	93	7.3
SHELBY															
COKER 201															
100 PERCENT															
SLM	41	1.06	48	4.6	89	23	6.4	2.7	2.7	3.4	3.4	3	4	95	5.9
SLM	41	1.05	47	5.2	92	23	5.6	1.5	1.5	2.2	2.2	2	3	98	7.4
SLM	41	1.05	46	3.7	87	22	5.9	1.9	1.9	2.6	2.6	2	3	96	6.5
SOUTH CAROLINA															
MANNING															
MCNAIR 612															
85 PERCENT															
M	31	34	1.10	45	4.7	85	23	6.3	1.2	2.0	2.0	2	3	99	4.9
SM LT GR 26	34	1.10	45	4.6	80	21	6.4	1.6	1.6	2.6	2.6	2	3	97	5.7

1/ Reduced from 41 because of bark

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprftsns.		Spin- ning Poten- tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
			22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Index	Index		No.	No.	Rd	+b	Index	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
Grade	Code	32d In.	Lbs.	Pct.	Pct.															
SOUTH EAST																				
GEORGIA																				
ALLEN TOWN																				
COKER 201																				
98 PERCENT																				
LM	51 34		89	28	5.4	3.8	90	60	31	26	44	67.1	10.8	89	88.0	2.9	113	27.5	25.5	101
LM	51 34		94	28	5.6	3.4	90	60	30	24	51	66.5	10.5	87	84.9	3.3	104	28.1	25.1	98
1/ LM	51 34		95	31	5.7	4.1	90	70	29	20	50	69.6	10.3	93	85.5	3.1	106	27.2	25.6	102
BOSTWICK																				
DIXIE KING III																				
100 PERCENT																				
LM LT SP 52	34		94	30	5.3	3.7	120	90	18	11	53	64.6	11.1	85	90.1	3.2	116	26.9	25.5	102
LM LT SP 52	34		90	28	5.1	3.6	110	100	16	13	50	61.8	10.6	79	83.7	3.8	99	28.9	24.9	96
LM LT SP 52	33		92	27	5.8	3.9	110	90	15	11	50	61.2	10.1	77	83.8	3.7	100	28.9	24.2	93
DONALSONVILLE																				
DELTAPINE 16																				
75 PERCENT																				
SLM LT SP 42	34		86	27	5.6	3.8	80	70	27	25	50	67.9	10.4	89	86.0	2.9	108	27.0	25.7	103
LM LT SP 52	34		98	33	5.8	4.2	90	70	33	25	57	66.4	11.1	89	88.0	3.3	111	26.4	25.5	103
LM LT SP 52	34		97	33	5.5	4.1	90	60	46	36	57	66.8	11.3	90	83.2	3.0	101	25.4	26.1	108
NORMAN PARK																				
COKER 201																				
98 PERCENT																				
SLM LT SP 42	34		90	29	5.4	4.0	100	80	20	18	50	65.9	10.2	85	83.6	3.4	100	29.1	25.4	97
SLM	41 34		94	29	5.3	4.0	100	80	21	18	52	67.8	10.1	88	84.4	3.1	103	27.3	25.0	99
LM	51 34		100	35	5.8	4.4	100	90	19	16	56	67.2	10.3	88	83.8	2.8	103	26.3	25.5	103
NORTH CAROLINA																				
LAURINBURG																				
MCNAIR 612																				
100 PERCENT																				
SLM	41 36		100	32	5.5	3.9	100	70	30	20	57	62.6	10.5	80	83.3	3.6	99	27.9	25.4	100
LM	51 35		86	27	4.7	3.2	90	60	36	28	47	64.0	9.9	81	83.6	3.1	102	28.1	25.8	101
LM	51 35		93	28	5.3	3.5	80	60	49	32	47	65.0	10.0	83	83.7	3.0	102	28.3	25.3	99
SHELBY																				
COKER 201																				
100 PERCENT																				
SLM	41 35		99	28	5.4	3.4	120	90	13	9	51	66.0	11.1	88	87.3	3.6	108	26.7	25.4	102
SLM	41 34		97	28	5.2	3.5	120	80	11	11	48	67.1	11.0	90	85.1	3.3	104	27.3	25.3	101
SLM	41 34		98	29	5.4	3.5	120	90	9	7	52	68.1	10.6	91	80.2	3.9	90	28.6	24.8	96
SOUTH CAROLINA																				
MANNING																				
MCNAIR 612																				
85 PERCENT																				
M	31 34		103	33	5.6	3.8	90	70	21	19	58	66.8	10.9	89	83.5	3.3	100	28.0	25.4	100
SM LT GR 26	34		97	33	5.3	4.0	80	60	28	22	55	65.0	10.5	85	84.0	3.0	103	26.4	25.6	104

1/ Reduced from 41 because of bark

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975.--Continued

State, Production Area, Chronological sampling, and Classification		Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	Code	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color	
Name	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH EAST													
SOUTH CAROLINA													
HAYESVILLE													
COKER 201													
SLM	41	36	1.10	44	81	22	5.7	1.6	2.2	2	3	99	4.0
M	31	35	1.09	47	86	23	6.3	1.1	1.8	1	3	100	4.1
M	31	34	1.03	45	87	22	5.6	1.0	1.5	1	2	101	5.6
SOUTH CENTRAL													
ARKANSAS													
ALTHEIMER													
DELTAPINE 16													
SLM	41	36	1.15	46	82	24	7.4	2.2	3.1	1	3	101	4.8
SLM	41	36	1.14	46	85	23	7.5	2.0	3.0	1	2	101	5.5
SLM	41	35	1.12	44	80	24	7.9	1.8	2.6	2	2	99	5.9
DUMAS													
STONEVILLE 213													
SLM	41	35	1.12	47	83	22	6.3	2.5	3.1	1	3	101	5.0
SLM	41	35	1.11	46	82	23	6.8	2.8	3.5	2	3	100	5.0
SLM	41	34	1.08	45	82	22	6.1	1.8	2.8	2	3	96	5.3
HUGHES													
STONEVILLE 213													
SLM	41	35	1.11	46	90	22	5.3	1.6	2.5	1	3	100	4.8
SLM	41	35	1.12	46	84	23	6.2	1.8	2.7	2	3	100	5.1
SLM	41	35	1.06	45	90	23	5.4	2.1	3.0	2	3	97	5.8
KEISER													
DELTAPINE 16													
SLM	41	36	1.13	44	85	24	6.6	1.9	2.4	2	3	100	4.5
SLM	41	35	1.13	45	82	23	7.2	1.4	2.3	1	3	101	4.4
SLM	41	35	1.11	43	84	23	7.2	1.5	2.6	1	2	101	5.5
LEACHVILLE													
BRYCOT #4													
100 PERCENT													
SLM	41	35	1.11	46	91	24	5.0	1.7	2.5	1	3	101	4.8
SLM	41	35	1.14	44	93	22	5.5	1.9	2.6	1	3	101	4.8
SLM	41	35	1.11	43	86	22	6.3	2.2	3.5	1	3	101	5.0
LEACHVILLE													
STONEVILLE 213													
SLM	41	35	1.08	46	82	23	6.2	1.3	1.9	2	3	100	4.6
SLM	41	35	1.12	46	84	23	6.4	1.8	2.6	2	3	100	4.8
SLM	41	35	1.09	44	82	22	6.7	2.0	2.9	2	3	100	5.1

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfrctns.		Spin- ning Poten- tial	Color - 22s gray yarn		Color-22s blchd. yarn		Color - 22s dyed yarn		
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Reflect- ance	Yellow- ness		Com- posite	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
Grade	Staple																
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	+b	Index	Index
SOUTH EAST																	
SOUTH CAROLINA																	
HAYESVILLE																	
COKER 201																	
90 PERCENT																	
SLM	41	36	104	37	5.5	4.0	100	60	21	15	61	67.1	11.0	90	85.2	3.1	105
M	31	35	99	29	5.5	3.9	100	80	17	13	53	70.0	10.1	93	87.3	2.7	112
M	31	34	99	29	5.5	3.9	120	80	14	13	50	70.2	9.6	92	82.8	2.9	100
SOUTH CENTRAL																	
ARKANSAS																	
ALTHEIMER																	
DELTAPINE 16																	
100 PERCENT																	
SLM	41	36	111	38	6.0	4.6	100	80	18	16	67	69.8	10.3	93	83.6	2.6	104
SLM	41	36	120	41	6.6	5.3	110	90	19	13	66	70.5	10.1	94	86.3	2.9	109
SLM	41	35	121	41	7.7	5.5	100	80	19	15	72	69.1	10.0	91	86.8	3.3	108
DUMAS																	
STONEVILLE 213																	
100 PERCENT																	
SLM	41	35	95	31	5.5	3.8	100	80	16	11	53	68.9	11.0	94	85.2	3.3	104
SLM	41	35	103	35	5.5	4.2	110	80	25	15	56	72.1	10.8	99	91.4	3.1	120
SLM	41	34	106	32	6.4	4.7	120	90	20	14	58	68.6	10.1	90	84.4	3.2	103
HUGHES																	
STONEVILLE 213																	
100 PERCENT																	
SLM	41	35	103	30	5.3	3.5	100	70	22	16	52	69.8	10.3	93	86.9	3.1	109
SLM	41	35	101	34	6.0	4.0	100	90	20	18	60	67.3	11.2	91	84.7	3.4	103
SLM	41	35	99	32	5.0	3.9	100	80	23	18	54	67.8	10.7	90	81.2	3.3	95
KEISER																	
DELTAPINE 16																	
100 PERCENT																	
SLM	41	36	111	39	6.3	4.6	110	60	17	13	69	68.8	10.6	92	85.1	3.2	105
SLM	41	35	110	37	6.4	4.8	100	80	17	16	68	69.8	10.7	95	88.5	2.9	114
SLM	41	35	102	35	5.8	4.4	120	90	11	9	62	69.3	10.5	93	82.1	3.3	97
LEACHVILLE																	
BRYCOT #4																	
100 PERCENT																	
SLM	41	35	96	30	4.8	3.4	90	60	18	14	53	69.4	10.4	93	84.7	2.5	105
SLM	41	35	103	34	5.4	4.1	100	70	20	14	58	69.1	10.7	93	84.8	3.2	104
SLM	41	35	104	31	5.5	3.7	100	60	21	18	59	68.3	10.1	89	82.2	3.4	97
LEACHVILLE																	
STONEVILLE 213																	
100 PERCENT																	
SLM	41	35	94	30	5.3	3.8	110	60	24	18	50	69.2	10.6	93	84.1	3.0	103
SLM	41	35	99	34	5.7	4.3	90	70	16	15	60	69.1	10.6	93	82.6	3.0	100
SLM	41	35	99	32	5.7	4.3	100	70	21	12	54	68.9	10.7	93	86.7	3.3	108

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification				Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste	
Grade	Code	32d in.	2.5% span length	50/2.5 unif.	Rdg.		Mpsi	G/tex		Pct.	Visible waste	Total waste	Gray- ness	Yellow- ness		Composite color
SOUTH CENTRAL																
ARKANSAS																
MARION																
DELTAPINE 16																
SLM	41	35	1.13	44	4.0	85	23	7.2	1.2	2.0	1	2	102	4.2		
SLM	41	35	1.14	45	4.5	84	23	7.0	1.6	2.3	1	2	102	4.6		
SLM	41	35	1.09	45	4.2	84	24	7.7	1.5	2.4	1	2	101	5.9		
OSCEOLA																
STONEVILLE 213																
LM+	50	34	1.08	45	4.7	84	24	5.9	3.1	4.0	2	3	97	5.1		
SLM	41	34	1.08	45	4.8	83	22	5.9	2.7	3.3	1	3	101	5.5		
SLM	41	34	1.10	45	4.4	84	22	6.9	2.4	3.2	1	3	100	5.0		
TURRELL																
STONEVILLE 213																
LM	51	35	1.12	46	4.6	84	23	6.2	4.3	5.0	3	3	96	6.2		
LM	51	35	1.11	46	4.4	85	23	7.2	3.9	5.1	2	3	99	7.8		
SLM	41	34	1.05	43	3.7	86	24	7.2	2.1	3.2	1	3	100	7.2		
VICTORIA																
STONEVILLE 7A																
SLM	41	36	1.15	48	5.0	94	24	4.7	2.8	3.6	2	3	100	5.7		
SLM	41	35	1.12	46	5.3	93	23	4.6	2.5	3.2	2	3	98	5.7		
SLM	41	35	1.13	45	4.8	94	23	5.3	2.8	3.9	2	3	101	6.1		
WYNNE																
DELTAPINE 16																
SLM	41	35	1.13	44	4.0	81	23	7.6	2.1	2.9	2	3	100	5.1		
SLM	41	35	1.10	45	4.5	86	23	7.7	1.7	2.7	2	3	100	6.2		
SLM LT SP 42	34	34	1.10	44	4.2	82	22	7.8	2.6	3.8	3	3	91	7.2		
LOUISIANA																
LAKE PROVIDENCE																
DELTAPINE 16																
SLM	41	35	1.10	45	4.5	84	23	6.9	1.5	2.2	1	2	101	5.2		
SLM	41	35	1.14	45	3.9	80	24	7.5	2.0	2.7	2	2	99	4.8		
SLM	41	35	1.12	44	4.1	81	23	7.7	1.4	2.0	1	2	100	5.3		
LAKE PROVIDENCE																
STONEVILLE 213																
SLM	41	35	1.10	45	4.8	88	22	5.6	2.5	3.3	2	3	100	5.2		
SLM	41	35	1.11	45	4.5	86	23	6.6	1.6	2.6	2	2	97	6.2		
SLM	41	34	1.08	43	4.0	82	22	6.1	2.2	3.1	2	2	98	5.8		

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

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State, Production Area, Chronological sampling, and Classification				Yarn strength		Yarn elongation		Yarn appearance		Yarn imprftns.		Spinning Potential	Color - 22s gray yarn			Color - 22s bichd. yarn			Color - 22s dyed yarn		
Grade	Code	32d In.	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Index	Index	22s or 27 tex	50s or 12 tex		Reflectance	Yellowness	Composite	Reflectance	Yellowness	Composite	Reflectance	Blue-ness	Composite
SOUTH CENTRAL																					
ARKANSAS																					
MARION																					
DELTAPINE 16																					
SLM	41	35	106	37	6.5	4.8	90	70	15	10	64	70.8	9.8	94	86.0	2.9	108	27.8	25.7	101	
SLM	41	35	109	35	6.3	4.6	100	80	9	10	61	70.0	10.0	93	83.5	3.2	101	26.6	26.0	105	
SLM	41	35	112	36	6.4	5.0	110	90	15	10	59	69.9	9.4	90	83.6	3.3	101	28.2	25.5	100	
OSCEOLA																					
STONEVILLE 213																					
LM+	50	34	97	33	5.3	3.8	90	70	18	16	50	69.5	10.9	95	84.8	3.3	104	27.0	26.2	105	
SLM	41	34	96	31	5.4	4.1	100	70	18	14	53	69.5	10.1	92	88.0	3.0	112	26.2	26.1	106	
SLM	41	34	103	30	6.2	3.9	100	90	17	15	50	69.2	10.5	93	87.6	3.0	111	26.2	26.1	106	
TURRELL																					
STONEVILLE 213																					
LM	51	35	101	34	5.6	4.3	80	60	39	25	57	67.8	10.8	91	83.2	3.3	100	25.5	26.2	108	
LM	51	35	104	35	5.6	4.3	100	70	35	22	59	69.2	11.1	95	83.8	3.2	102	25.7	27.2	111	
SLM	41	34	98	31	6.0	4.4	90	60	26	22	49	70.1	10.9	96	83.7	3.7	99	27.6	25.5	101	
VICTORIA																					
STONEVILLE 7A																					
SLM	41	36	99	31	4.3	3.4	110	70	17	15	54	69.8	10.3	93	85.7	3.1	106	27.4	27.5	109	
SLM	41	35	95	29	4.8	3.4	100	60	19	16	50	69.1	10.3	92	83.6	3.3	101	27.1	26.1	104	
SLM	41	35	99	31	5.0	3.6	90	80	20	14	53	69.2	10.4	92	87.1	2.9	111	26.2	26.0	106	
WYNNE																					
DELTAPINE 16																					
SLM	41	35	114	38	6.7	4.9	100	80	25	19	67	69.1	10.7	93	88.1	3.0	112	25.5	26.0	107	
SLM	41	35	107	36	6.6	4.8	120	90	24	19	57	68.5	11.1	93	84.2	3.0	103	26.6	26.8	108	
SLM LT SP	42	34	108	35	6.5	4.7	100	90	17	13	63	64.7	10.9	85	82.7	3.0	100	26.6	26.1	105	
LOUISIANA																					
LAKE PROVIDENCE																					
DELTAPINE 16																					
SLM	41	35	112	40	6.4	4.9	100	80	17	12	67	69.4	9.4	89	84.7	3.0	104	26.7	26.3	106	
SLM	41	35	117	39	7.4	4.8	110	90	18	15	72	68.6	9.5	88	85.0	3.0	105	27.8	25.9	102	
SLM	41	35	126	40	7.0	5.4	110	80	23	18	73	68.1	10.0	89	84.9	3.1	105	27.8	25.7	101	
LAKE PROVIDENCE																					
STONEVILLE 213																					
SLM	41	35	101	32	5.3	3.8	90	70	28	26	55	69.0	10.8	93	85.2	3.1	105	26.9	26.4	106	
SLM	41	35	103	34	5.4	4.0	100	70	27	18	56	70.8	10.0	94	85.0	3.2	104	28.3	25.6	100	
SLM	41	34	107	34	6.3	4.7	100	80	24	19	52	69.3	9.8	90	83.8	3.2	102	28.1	25.6	100	

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification				Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste	
Grade	Code	32d in.	In.	Pct.	Rdg.		Mpsi	G/tex		Pct.	Pct.	Visible waste	Total waste	Gray- ness		Yellow- ness	Composite color
Name													No.	No.	Index	Pct.
SOUTH CENTRAL																
LOUISIANA																
SHREVEPORT																
DELTA PINE 16																
M	31	35	1.14	45	4.4	85	25	7.6		1.0	2.0		1	3	104	4.2
SLM	41	35	1.09	45	4.2	83	22	6.9		1.7	2.4		2	3	98	5.8
SLM	41	35	1.07	42	2.9	85	23	7.2		2.2	3.4		1	3	103	6.6
MISSISSIPPI																
ARCOLA																
DELTA PINE 16																
M	31	36	1.14	45	4.5	82	24	7.6		1.3	1.9		1	2	103	4.0
M	31	36	1.14	46	4.4	83	24	7.2		1.0	1.8		1	2	103	3.5
SLM	41	35	1.11	43	4.1	84	22	7.5		1.9	3.2		2	2	96	5.1
COMO																
STONEVILLE 213																
SLM	41	34	1.05	45	4.3	85	23	6.0		2.0	2.9		1	3	103	5.3
SLM	41	34	1.04	45	4.3	81	22	7.4		2.3	3.2		1	3	102	4.8
LM	51	34	1.05	43	3.8	83	21	6.7		3.8	4.8		4	3	85	5.9
EDWARDS																
STONEVILLE 213																
SLM	41	35	1.10	46	4.6	84	22	6.1		2.2	3.3		2	3	100	5.2
LM	51	35	1.08	45	4.3	83	23	6.6		3.4	4.1		2	3	96	5.9
SLM	41	34	1.06	44	3.9	81	21	6.3		2.2	3.0		2	2	98	4.5
GLENDORA																
STONEVILLE 213																
LM	51	35	1.12	47	4.8	86	24	6.3		2.7	3.8		3	3	96	6.1
LM	51	35	1.12	45	4.3	82	23	6.3		2.7	3.6		3	3	94	6.5
LM	51	35	1.09	44	3.9	83	22	6.6		3.4	4.5		3	3	93	7.5
GREENWOOD																
STONEVILLE 731N																
LM+	50	35	1.13	47	5.1	94	24	5.3		3.3	4.0		1	2	101	5.9
SLM	41	35	1.11	46	4.7	93	23	5.4		2.5	3.4		1	2	100	6.9 1/
LM	51	35	1.10	44	4.6	91	23	5.6		2.1	3.2		3	2	92	6.7
INDIANOLA																
DIXIE KING III																
LM	51	34	1.09	46	4.4	94	23	5.7		3.0	3.8		2	3	97	5.9
LM	51	34	1.06	46	4.3	94	24	5.7		3.3	3.8		3	3	92	6.9 1/
LM	51	34	1.06	45	3.8	81	22	5.9		4.3	5.8		3	3	91	8.3

1/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance			Yarn Imprfctns.		Spin- ning Poten- tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn			
			22s or 27 tex	50s or 12 tex	22s or 50s or 12 tex	50s or 12 tex	Index	Index	22s or 27 tex	50s or 12 tex	No.		No.	Rd	+b	Index	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
Grade		Staple	<u>Lbs.</u>	<u>Lbs.</u>	<u>Pct.</u>	<u>Pct.</u>							<u>Rd</u>	<u>+b</u>	<u>Index</u>	<u>Rd</u>	<u>+b</u>	<u>Index</u>	<u>Rd</u>	<u>-b</u>	<u>Index</u>	
SOUTH CENTRAL																						
LOUISIANA																						
SHREVEPORT																						
	M		31	35	118	40	7.0	4.9	90	14	9	67	73.2	10.7	100	90.9	2.9	119	25.5	26.5	109	
	SLM		41	35	106	34	6.0	5.1	100	70	20	62	67.8	10.4	89	84.9	3.1	105	26.5	26.3	106	
	SLM		41	35	113	38	6.8	5.0	90	70	22	17	67	69.4	11.2	96	86.1	3.3	107	26.7	25.0	101
MISSISSIPPI																						
ARCOLA																						
	M		31	36	114	40	6.5	5.0	110	16	10	67	72.5	10.1	98	92.5	2.8	124	25.5	26.4	109	
	M		31	36	120	41	7.4	5.0	110	10	8	68	71.7	9.9	96	84.5	2.8	105	27.0	27.1	108	
	SLM		41	35	111	37	6.7	5.0	110	90	8	68	69.8	9.8	92	83.7	3.0	102	27.0	25.0	100	
COMO																						
	SLM		41	34	100	30	5.8	3.8	100	20	16	52	70.6	10.8	97	86.4	3.1	108	26.9	27.3	109	
	SLM		41	34	110	35	6.4	4.4	100	80	19	18	70.9	11.1	98	87.7	2.9	112	25.9	26.5	108	
	LM		51	34	100	31	6.4	4.4	100	90	23	20	62.3	10.3	79	84.2	3.4	102	27.9	24.9	98	
EDWARDS																						
	SLM		41	35	95	31	5.5	3.9	110	19	11	55	68.5	10.8	92	83.2	3.1	101	26.6	26.6	107	
	LM		51	35	105	37	6.4	4.7	100	80	24	19	67.1	11.1	90	84.0	3.3	102	26.5	26.2	106	
	SLM		41	34	103	33	6.4	4.7	110	90	20	15	59	68.1	10.1	89	86.5	3.4	107	28.5	25.2	98
GLENDORA																						
	LM		51	35	103	36	5.4	4.4	100	26	20	59	67.2	10.8	89	84.3	3.2	103	25.6	27.3	112	
	LM		51	35	106	35	6.3	4.1	80	70	33	25	65.9	10.5	86	84.0	3.3	102	27.9	25.8	101	
	LM		51	35	99	36	6.0	4.4	80	60	36	24	62.9	10.2	80	82.9	3.1	100	26.7	25.6	103	
GREENWOOD																						
	LM+		50	35	100	32	4.9	3.7	90	28	20	54	70.0	10.5	94	85.0	3.0	105	26.4	27.8	112	
	SLM		41	35	105	34	5.4	3.3	110	80	25	19	51	70.9	9.7	94	83.4	3.1	101	26.4	27.2	110
	LM		51	35	95	31	5.0	3.7	80	70	42	31	53	66.7	10.1	86	85.2	3.6	103	28.3	25.7	100
INDIANOLA																						
	LM		51	34	118	40	6.0	4.4	110	16	15	68	68.6	11.1	94	85.3	3.4	104	26.8	26.9	108	
	LM		51	34	113	40	5.5	4.3	100	70	26	15	65	66.1	10.4	86	83.5	3.2	101	28.9	25.5	98
	LM		51	34	107	37	5.5	4.5	90	80	25	23	63	65.9	12.1	91	84.1	3.3	102	27.0	25.0	100

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	Code	32d in.	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name			In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	
SOUTH CENTRAL														
MISSISSIPPI														
LYON														
STONEVILLE 213														
100 PERCENT														
LM	51	35	1.12	45	4.5	88	23	6.2	3.5	2	3	100	6.4	
LM	51	35	1.11	45	4.4	87	23	5.8	2.7	2	3	97	6.5	
LM	51	34	1.09	42	3.6	81	20	5.9	3.1	4	2	89	8.4	
MACON														
DELTAPINE 16														
85 PERCENT														
SLM	41	35	1.12	46	4.5	85	23	7.2	1.8	2	2	99	3.7	
SLM	41	35	1.07	46	4.4	82	22	7.3	2.0	2	2	99	4.6	
SLM	41	35	1.06	45	4.4	83	22	7.8	1.8	2	2	100	6.3	
NITTA YUMA														
DELTAPINE 25														
100 PERCENT														
SLM	41	35	1.10	46	4.9	88	24	6.0	2.4	1	2	101	5.4	
SLM	41	35	1.09	46	4.4	87	23	6.5	2.6	2	3	99	6.3	
SLM	41	35	1.11	44	4.1	83	24	6.4	2.6	2	2	95	7.4	
PANTHER BURN														
DELTAPINE 16														
100 PERCENT														
SLM	41	35	1.12	45	4.5	82	23	6.7	2.6	1	2	101	5.2	
SLM	41	36	1.17	44	4.3	83	23	7.5	2.1	1	2	101	5.4	
LM	51	35	1.13	43	3.9	81	24	7.8	1.5	3	2	95	4.6	
ROBINSONVILLE														
DELTAPINE 45A														
100 PERCENT														
SLM	41	35	1.12	48	4.4	84	24	7.2	2.8	1	3	101	5.3	
SLM	41	35	1.07	46	4.4	84	24	7.0	2.2	1	2	102	5.1	
LM	51	34	1.03	43	3.6	81	22	7.2	2.7	3	2	92	7.1	
SCOTT														
DELTAPINE 16														
100 PERCENT														
SLM	41	35	1.12	43	4.3	83	24	6.7	1.5	1	2	103	4.9	
SLM	41	35	1.14	43	4.4	82	24	7.2	1.7	1	2	101	5.5	
SLM	41	35	1.13	43	4.0	82	24	7.1	1.4	2	2	97	4.7	
SCOTT														
DELTAPINE 55														
100 PERCENT														
LM+	50	36	1.15	45	4.0	86	24	6.5	2.1	1	2	100	6.2	
SLM	41	35	1.14	44	3.8	83	22	6.3	2.0	2	2	97	5.9	
SLM	41	35	1.12	44	4.1	88	24	6.4	1.8	2	2	97	7.3	

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance			Yarn imprftsns.			Spin- ning Poten- tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
			22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Index	Index	No.	No.		Rd	+b	Index	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
Grade	Code	32d In.	Lbs.	Pct.	Pct.	Index	Index	Index	No.	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index	
SOUTH CENTRAL MISSISSIPPI																						
LYDN																						
STONEVILLE 213																						
100 PERCENT																						
LM	51	35	107	35	5.9	4.2	100	80	24	16	57	69.9	10.8	95	87.6	2.9	112	25.4	26.4	109		
LM	51	35	101	34	5.8	4.5	80	80	30	20	55	70.6	10.5	96	81.6	3.1	97	26.4	27.0	109		
LM	51	34	103	32	6.0	4.0	100	70	26	20	56	66.2	10.1	86	85.7	3.3	106	27.7	25.0	99		
MACON																						
DELTAPINE 16																						
85 PERCENT																						
SLM	41	35	104	35	5.9	4.6	110	90	14	9	59	70.1	10.0	93	87.7	2.9	112	27.0	25.8	103		
SLM	41	35	109	35	6.6	4.5	120	90	11	8	60	70.3	10.2	94	84.8	2.8	106	27.7	26.2	103		
SLM	41	35	104	34	6.4	4.6	120	90	17	15	58	72.0	9.9	96	83.9	3.0	103	28.0	26.0	102		
NITTA YUMA																						
DELTAPINE 25																						
100 PERCENT																						
SLM	41	35	104	33	5.5	3.8	100	80	23	17	54	69.8	10.7	95	86.2	3.1	108	27.2	27.2	108		
SLM	41	35	102	34	5.3	4.3	110	80	25	18	54	69.4	10.2	92	83.9	2.9	103	27.9	25.7	101		
SLM	41	35	112	35	6.8	4.5	100	70	30	26	58	67.6	9.6	87	84.1	3.3	102	29.4	25.1	96		
PANTHER BURN																						
DELTAPINE 16																						
100 PERCENT																						
SLM	41	35	108	37	6.5	4.3	100	80	24	17	65	70.8	9.8	94	87.1	2.8	111	25.8	26.0	106		
SLM	41	36	116	39	6.8	5.0	100	80	24	17	67	66.9	10.9	89	93.0	2.9	124	26.9	25.6	103		
LM	51	35	109	38	7.1	5.4	110	70	24	19	68	67.4	9.8	87	84.9	2.9	105	27.0	26.3	105		
ROBINSONVILLE																						
DELTAPINE 45A																						
100 PERCENT																						
SLM	41	35	119	42	6.8	5.1	90	90	21	13	70	70.5	10.7	96	88.2	2.8	114	25.7	26.7	109		
SLM	41	35	116	40	6.9	4.9	100	80	17	14	62	70.4	10.2	94	84.3	3.0	104	27.1	26.4	105		
LM	51	34	100	34	6.3	4.7	90	80	25	18	57	64.7	10.2	83	87.0	3.0	110	27.6	24.7	98		
SCOTT																						
DELTAPINE 16																						
100 PERCENT																						
SLM	41	35	111	37	6.4	4.5	110	70	17	14	64	71.3	9.7	94	88.3	2.8	114	26.1	25.9	105		
SLM	41	35	116	39	7.0	4.9	90	70	21	17	65	71.6	9.9	96	88.5	2.7	115	26.3	25.6	104		
SLM	41	35	110	38	6.5	4.8	100	70	19	16	69	69.2	11.6	97	85.0	4.1	101	28.9	24.8	95		
SCOTT																						
DELTAPINE 55																						
100 PERCENT																						
LM+	50	36	120	57	6.8	5.2	90	80	27	21	63	71.4	9.9	95	85.0	3.2	104	26.6	26.7	108		
SLM	41	35	108	39	5.8	4.8	80	70	30	26	69	69.3	9.6	90	84.7	3.1	104	27.7	25.8	102		
SLM	41	35	112	37	6.5	4.6	100	70	19	18	63	67.7	9.7	87	84.4	3.0	104	26.9	25.0	100		

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification		Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	Code	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color	
Name	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL													
MISSISSIPPI													
TRI88ETT													
STONEVILLE 213													
SLM	41	35	1.12	46	5.1	90	23	5.2	3.0	3.7	2	3	98
SLM	41	35	1.11	45	4.7	87	23	6.1	2.3	3.1	2	3	97
LM	51	35	1.07	44	4.3	87	21	5.6	2.5	3.8	4	2	85
STONEVILLE 256													
100 PERCENT													
SLM	41	35	1.13	45	5.1	96	22	4.9	1.8	2.5	1	2	103
SLM	41	35	1.11	46	4.8	96	22	5.0	2.0	2.6	1	3	101
LM	51	34	1.08	43	4.2	88	22	5.0	2.8	3.9	4	2	86
MISSOURI													
BELL CITY													
STONEVILLE 213													
100 PERCENT													
M	31	34	1.04	46	4.2	80	21	6.7	1.2	1.8	1	3	102
M	31	35	1.11	45	4.6	86	21	5.9	1.1	1.7	1	3	102
SLM	41	35	1.08	45	4.0	83	22	6.5	1.6	2.4	2	3	100
COOTER													
DELTAPINE 16													
75 PERCENT													
SLM	41	35	1.14	47	4.7	83	22	6.9	2.2	3.2	1	2	102
SLM	41	35	1.13	44	4.6	84	23	7.1	2.3	3.2	1	2	101
LM	51	35	1.08	45	4.0	84	21	6.7	2.7	3.7	3	3	93
ESSEX													
STONEVILLE 213													
99 PERCENT													
SLM	41	34	1.09	46	4.6	81	21	6.6	2.6	3.4	2	3	99
LM	51	35	1.08	45	4.4	78	22	6.8	2.8	3.9	3	3	95
LM LT SP	52	35	1.10	46	4.2	82	23	7.5	3.5	4.5	4	4	89
SENATH													
AUBURN M													
100 PERCENT													
SLM	41	34	1.07	45	4.1	82	20	6.5	2.1	2.7	2	3	99
SLM	41	35	1.08	44	4.1	81	20	6.4	1.8	2.7	2	3	98
LM	51	35	1.14	45	4.1	87	24	7.4	3.3	4.4	2	2	97
TENNESSEE													
BRADEN													
DELTAPINE 16													
95 PERCENT													
SLM	41	35	1.07	45	4.6	86	22	6.4	1.6	2.2	1	3	102
SLM	41	35	1.09	45	4.3	83	23	7.7	1.5	2.4	1	3	101
LM	51	34	1.06	45	4.5	84	23	6.1	2.7	3.4	3	3	94

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength			Yarn elongation		Yarn appearance			Yarn imprfctns.		Spin- ning Poten- tial	Color - 22s gray yarn			Color - 22s dyed yarn				
			22s or 27 tex	50s or 12 tex	Ibs.	Pct.	50s or 12 tex	Pct.	22s or 27 tex	Index	50s or 12 tex	Index		22s or 27 tex	No.	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
Grade	Code	32d In.																			
SOUTH CENTRAL																					
MISSISSIPPI																					
TRI88ETT																					
STONEVILLE 213																					
SLM	41	35	98	29	5.4	3.7	100	90	12	10	48	68.5	10.9	93	82.0	3.3	97	26.7	27.0	109	
SLM	41	35	106	33	6.1	4.0	100	90	15	12	52	69.7	10.5	94	86.4	3.1	108	26.2	25.8	105	
LM	51	35	92	28	5.4	3.7	100	80	22	14	52	63.4	9.6	80	83.6	3.2	101	27.5	24.7	98	
STONEVILLE 256																					
SLM	41	35	95	30	4.9	3.4	110	80	10	9	53	70.7	10.3	95	85.1	3.2	105	26.0	27.1	110	
SLM	41	35	103	30	5.4	3.7	120	90	11	9	52	71.5	10.7	98	83.1	3.1	100	26.8	26.8	108	
LM	51	34	99	28	5.3	3.7	110	90	12	12	51	63.8	9.7	81	87.9	3.4	110	28.4	24.5	95	
MISSOURI																					
BELL CITY																					
STONEVILLE 213																					
M	31	34	98	32	6.0	4.3	90	70	22	20	57	69.8	11.0	96	86.1	3.3	107	27.3	26.9	107	
M	31	35	97	31	5.6	3.6	100	80	15	11	53	70.8	10.5	96	87.2	2.7	112	25.6	26.4	108	
SLM	41	35	104	32	5.8	4.3	100	80	16	16	57	68.1	10.8	91	84.0	3.5	101	27.2	26.0	104	
DELTAPINE 16																					
COTTER	41	35	105	36	6.3	4.7	110	90	17	17	63	70.3	10.5	95	86.4	3.0	108	26.2	28.3	115	
SLM	41	35	106	36	6.0	4.7	110	90	15	11	63	72.2	10.2	97	85.5	2.8	107	26.1	26.6	108	
LM	51	35	96	28	5.8	4.1	100	80	20	18	50	65.1	10.6	85	84.4	3.4	102	27.5	26.1	103	
ESSEX																					
STONEVILLE 213																					
SLM	41	34	92	28	5.7	3.8	100	70	18	10	52	68.4	11.3	94	82.8	3.2	99	27.1	26.6	106	
LM	51	35	94	29	6.0	3.8	100	80	17	15	53	69.7	11.2	96	93.2	3.1	124	25.3	26.4	109	
LM LT SP	52	35	102	34	5.9	4.3	100	80	23	18	59	63.9	11.3	85	84.7	3.5	102	26.2	26.9	109	
AUBURN M																					
SENATH	41	34	91	30	5.0	4.3	110	80	21	14	55	69.0	10.7	93	83.6	2.8	103	27.1	26.7	107	
SLM	41	35	98	29	5.9	4.1	100	70	16	15	56	65.8	10.9	87	81.6	3.2	96	27.0	26.0	104	
LM	51	35	111	39	6.2	5.0	100	80	19	14	66	68.4	9.9	89	85.4	3.3	105	27.6	25.9	102	
TENNESSEE																					
BRADEN																					
DELTAPINE 16																					
SLM	41	35	105	34	6.0	4.6	100	80	11	7	56	69.7	10.8	95	85.7	3.2	106	26.7	26.9	108	
SLM	41	35	105	33	5.5	4.3	100	90	14	8	53	70.3	10.5	95	84.6	3.2	103	28.4	25.6	100	
LM	51	34	101	30	5.9	4.3	110	90	14	11	54	66.1	10.0	85	83.5	3.1	101	28.0	25.9	102	

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification				Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	Code	32d in.	In.	Pct.	Rdg.		Mpsi	G/tex		Pct.	Visible waste	Total waste	Gray- ness	Yellow- ness		Composite color
SOUTH CENTRAL															
TENNESSEE															
CEDAR GROVE															
80 PERCENT															
DIXIE KING III															
SLM	41	35	1.02	45	4.3	82	21	6.5	1.2	1.9	2	3	96	4.2	
LM	51	34	1.03	45	4.3	85	22	5.7	2.0	2.6	4	3	87	5.3	
75 PERCENT															
STONEVILLE 603															
ELORA															
SLM	41	34	1.06	45	3.9	83	22	7.5	2.6	3.7	2	3	98	5.6	
SLM	41	34	1.03	44	3.9	80	21	7.5	2.6	3.6	2	3	97	5.0	
SLM	41	34	1.03	44	3.8	79	23	7.0	2.7	3.7	2	2	97	6.1	
75 PERCENT															
FLINTVILLE															
HANCOCK															
SLM	41	34	1.04	46	4.0	82	22	6.4	1.9	2.8	2	3	96	5.8	
SLM	41	34	1.03	45	4.1	81	22	7.1	2.0	2.9	2	3	96	5.1	
LM	51	34	1.02	45	3.9	84	22	6.2	2.5	3.3	3	3	93	6.7	
95 PERCENT															
MILLINGTON															
REX SMOOTHLEAF															
LM	51	35	1.12	45	4.0	84	22	6.2	3.4	4.5	2	3	98	6.3	
LM	51	34	1.06	45	4.0	84	22	6.4	3.6	5.5	2	3	96	7.0	
LM	51	34	1.07	44	3.9	83	22	5.9	2.7	4.0	4	2	87	6.6	
LM	51	34	1.06	45	4.0	80	22	6.9	3.8	4.9	4	2	88	7.7	
95 PERCENT															
SOUTH WEST															
SOUTH TEXAS															
DANEVANG															
DELTAPINE 16															
SLM	41	35	1.13	43	4.4	82	24	7.5	2.6	3.3	1	3	101	4.2	
M	31	35	1.11	45	4.8	82	23	7.5	1.7	2.2	0	3	104	4.0	
SLM LT SP 42	42	34	1.05	45	4.4	82	21	7.4	2.8	3.5	3	3	94	5.2	
75 PERCENT															
LOS FRESNOS															
STONEVILLE 7A															
SLM LT SP 42	42	35	1.07	46	4.5	77	21	6.9	1.8	2.8	4	3	89	5.2	
SLM	41	34	1.11	44	4.5	91	23	5.5	1.7	2.8	2	3	99	4.8	
LM	51	35	1.11	44	3.2	82	21	6.5	3.9	5.1	3	2	94	6.1	
99 PERCENT															
SEBASTIAN															
STONEVILLE 213															
SLM	41	34	1.08	48	4.6	76	22	7.5	1.4	2.0	3	4	95	4.5	
SLM LT SP 42	42	34	1.06	47	4.7	84	22	6.3	1.6	2.4	3	4	94	4.9	
SLM LT SP 42	42	33	1.05	45	4.4	79	22	6.3	2.3	3.3	4	4	90	5.4	

State, Production Area, Chronological sampling, and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin- ning Poten- tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn			
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite	
Grade	Staple																			
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
TENNESSEE																				
CEDAR GROVE																				
80 PERCENT																				
DIXIE KING III																				
80 PERCENT																				
75 PERCENT																				
STONEVILLE 603																				
ELORA																				
75 PERCENT																				
FLINTVILLE																				
75 PERCENT																				
HANCOCK																				
75 PERCENT																				
MILLINGTON																				
95 PERCENT																				
REX SMOOTHLEAF																				
95 PERCENT																				
SOUTH WEST																				
SOUTH TEXAS																				
DANEVANG																				
75 PERCENT																				
DELTAPINE 16																				
75 PERCENT																				
STONEVILLE 7A																				
99 PERCENT																				
LOS FRESNOS																				
99 PERCENT																				
STONEVILLE 213																				
98 PERCENT																				
SEBASTIAN																				
98 PERCENT																				
STONEVILLE 213																				
98 PERCENT																				

— 12 — DISCLOSURE OF BANK

— 12 — DISCLOSURE OF BANK

1/ Reduced from 41 because of bark

1/ Reduced from 41 because of bark

2/ Reduced from 42 because of bark

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock		
Grade	Code	32d in.	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color	Picker & Card waste
		In.		Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST													
NORTHWEST TEXAS													
ROPERVILLE													
LOCKETT 4789A													
SLM	41	32	0.97	42	2.5	85	22	6.5	2.1	3.2	1	3	103
SLM LT SP 42		32	0.98	41	2.5	84	22	6.4	2.0	3.8	1	3	103
SLM LT SP 42		32	0.99	42	2.6	85	22	6.8	2.2	3.8	1	4	102
VERNON													
LOCKETT BXL													
100 PERCENT													
SLM LT SP 42		33	1.04	45	4.0	90	23	6.1	2.8	4.0	3	4	95
SLM LT SP 42		33	1.04	44	3.6	87	23	6.0	3.2	4.0	3	4	96
SLM LT SP 42		32	0.97	45	3.7	82	21	6.4	2.3	3.0	2	4	99
WEST													
ARIZONA													
BUCKEYE													
DELTAPINE 61													
100 PERCENT													
M	31	35	1.11	45	5.2	92	25	6.4	1.2	1.6	0	3	104
M	31	35	1.11	46	5.3	87	25	7.0	1.4	2.4	0	3	105
M	31	35	1.10	43	3.6	90	24	6.8	1.1	1.9	0	2	104
CASA GRANDE													
DELTAPINE 61													
100 PERCENT													
M	31	36	1.15	46	4.5	84	24	7.4	1.3	2.6	1	3	104
M	31	36	1.14	45	4.5	81	24	7.4	1.3	2.4	0	3	104
M LT SP 32		36	1.13	42	3.5	81	23	7.8	1.6	2.6	0	3	104
ELOY													
DELTAPINE 66													
91 PERCENT													
M	31	35	1.07	44	4.3	92	24	6.2	1.6	2.9	1	3	102
M	31	35	1.08	43	3.9	90	23	5.9	1.6	2.2	1	3	103
M LT SP 32		34	1.09	41	3.2	84	23	6.5	1.4	2.6	2	4	101
GILA BEND													
STONEVILLE 213													
100 PERCENT													
M	31	35	1.09	45	5.2	89	24	5.8	1.1	1.9	1	4	103
M	31	35	1.08	44	5.1	89	23	5.6	1.2	1.9	1	3	103
SLM	41	34	1.09	43	4.7	83	23	6.0	2.5	3.3	1	3	102
MARICOPA													
DELTAPINE 16													
100 PERCENT													
M	31	36	1.14	45	4.8	84	24	6.9	1.4	2.2	0	3	104
M	31	35	1.13	44	4.5	84	24	7.1	1.7	2.6	0	3	104
M	31	35	1.07	41	3.2	83	23	7.4	1.5	2.5	1	3	104
													6.4 ✓

1/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

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State, Production Area, Chronological sampling, and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin- ning poten- tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn			
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Index	Index		No.	No.	Rd	+b	Index	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
Grade	Staple																			
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WEST																				
NORTHWEST TEXAS																				
ROPESVILLE																				
LOCKETT 4789A																				
SLM	41	32	106	33	6.4	4.3	70	60	40	35	54	69.3	12.0	98	87.0	3.6	108	27.9	24.9	98
SLM LT SP	42	32	101	32	6.4	4.4	60	60	60	49	1/72.5	10.0	97	85.9	3.1	107	26.7	25.0	101	
SLM LT SP	42	32	103	34	5.7	4.4	60	60	51	41	1/63.6	11.4	84	83.7	4.0	98	26.9	24.8	99	
VERNON																				
LOCKETT 8XL																				
SLM LT SP	42	33	108	34	5.8	4.0	90	70	20	17	54	65.4	11.2	87	84.5	3.1	104	26.6	24.9	100
SLM LT SP	42	33	106	36	5.7	4.1	100	70	27	21	56	64.4	12.0	87	82.7	3.1	99	26.3	25.8	105
SLM LT SP	42	32	102	31	6.2	4.2	90	70	23	19	50	65.6	11.4	88	82.8	2.8	101	26.1	26.7	109
WEST ARIZONA																				
BUCKEYE																				
DELTAPINE 61																				
M	31	35	103	34	5.4	3.8	90	90	14	12	50	73.3	10.4	100	86.1	2.8	109	26.0	26.4	108
M	31	35	107	37	5.9	4.6	120	90	15	11	53	73.1	10.8	101	84.4	2.8	105	26.1	27.6	112
M	31	35	111	37	6.1	4.4	100	80	18	13	56	72.1	10.9	99	85.6	3.1	106	26.7	25.6	103
CASA GRANDE																				
DELTAPINE 61																				
M	31	36	117	42	6.2	5.3	100	80	19	13	67	72.5	10.7	99	84.6	2.9	105	25.9	26.8	109
M	31	36	114	42	6.4	5.2	90	70	23	20	72	72.0	11.5	101	85.6	3.3	105	26.5	27.0	109
M LT SP	32	36	105	41	6.5	5.0	90	70	25	19	68	68.4	10.9	92	85.6	2.9	107	24.9	26.9	112
ELOY																				
DELTAPINE 66																				
M	31	35	106	35	5.5	4.0	90	70	15	16	52	70.2	10.8	96	84.5	3.1	104	26.4	26.3	106
M	31	35	116	38	6.5	5.1	90	70	15	14	57	70.1	10.9	96	84.0	3.1	102	25.3	26.6	110
M LT SP	32	34	104	35	6.3	4.8	100	70	18	16	57	68.6	11.7	96	87.0	3.1	110	25.5	26.0	107
GILA BEND																				
STONEVILLE 213																				
M	31	35	98	33	4.8	3.9	100	80	20	19	46	71.6	11.2	99	83.2	3.1	101	26.4	26.8	108
M	31	35	100	29	5.6	3.7	90	80	21	16	46	72.4	10.8	99	83.6	3.4	100	28.4	25.9	101
SLM	41	34	104	32	5.6	3.7	90	80	16	14	52	70.5	11.1	97	84.1	2.9	103	25.8	25.4	104
MARICOPA																				
DELTAPINE 16																				
M	31	36	107	37	5.7	4.1	100	80	25	21	57	71.9	10.7	98	85.5	3.5	104	26.7	26.8	108
M	31	35	106	36	5.8	4.7	100	70	17	16	56	65.6	11.0	87	86.1	3.2	107	28.0	25.2	99
M	31	35	104	36	6.1	4.4	70	60	37	27	61	69.3	10.6	93	85.2	3.2	105	26.5	26.3	106

1/ Insufficient cotton to run spinning potential tests

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	Code	32d in.	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color	
Name			In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
WEST														
CALIFORNIA														
ARVIN														
ACALA SJ-2														
SLM+	40	36	1.15	46	4.2	95	27	5.9	1.7	2.2	0	3	105	5.5
SLM	41	36	1.13	46	4.2	94	27	6.6	1.8	2.6	1	2	103	4.9
SLM	41	36	1.12	46	4.5	95	28	5.8	2.3	2.8	1	2	102	4.9
100 PERCENT														
BAKERSFIELD														
ACALA SJ-2														
M	31	35	1.10	47	4.3	92	27	5.8	1.2	1.9	0	3	105	4.2
SLM	41	35	1.11	44	4.1	92	26	6.4	1.7	2.6	2	3	96	4.6
SLM	41	35	1.12	45	4.0	92	26	6.0	1.8	2.8	1	2	100	5.9
100 PERCENT														
BUTTONWILLOW														
ACALA SJ-2														
M	31	35	1.12	45	3.9	94	28	5.7	1.1	1.9	0	3	105	4.2
M	31	35	1.10	44	3.8	94	27	5.7	1.6	2.7	1	3	103	4.9 1/
SLM	41	34	1.03	40	2.8	96	25	5.7	1.6	2.9	2	2	100	7.8
100 PERCENT														
CANTUA CREEK														
ACALA SJ-2														
M	31	36	1.12	44	3.5	92	27	5.9	1.2	2.0	0	3	106	5.4
SLM+	40	36	1.13	45	3.5	93	27	5.9	1.4	2.1	0	2	105	5.3
SLM+	40	35	1.13	46	3.5	92	26	6.9	1.2	1.8	0	2	104	7.8
90 PERCENT														
CORCORAN														
ACALA SJ-2														
SLM	41	36	1.07	44	3.7	96	29	6.5	2.1	3.2	1	3	102	4.9
SLM	41	36	1.11	44	4.0	89	25	6.0	1.5	2.4	0	2	104	5.0
SLM	41	35	1.12	46	4.5	89	26	6.0	1.8	2.7	1	3	103	6.6
97 PERCENT														
DOS PALOS														
ACALA SJ-2														
M	31	36	1.15	46	4.3	95	28	5.6	1.3	2.4	0	2	106	5.4
SLM+	40	36	1.16	46	3.8	95	27	5.4	1.5	2.2	0	2	104	5.2
SLM	41	36	1.15	46	3.5	98	28	5.9	1.9	2.8	1	2	101	6.6
95 PERCENT														
HANFORD														
ACALA SJ-2														
M	31	35	1.13	45	4.0	97	27	5.2	1.2	2.1	1	2	102	3.7
M	31	35	1.12	46	4.2	99	27	5.7	0.9	1.7	1	3	103	4.5
SLM	41	35	1.13	45	4.4	95	26	5.6	1.2	1.9	2	3	99	5.3

1/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn Imprfctns.		Spin- ning Poten- tial	Color - 22s gray yarn			Color - 22s blechd. yarn			Color - 22s dyed yarn																					
			22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Index	Index		Index	No.	Rd	+b	Index	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite																	
Grade	32d In.	Lbs.	Lbs.	Pct.	Pct.	Pct.					No.	Rd	+b	Index	Reflect- ance	Yellow- ness	Com- posite	Rd	-b	Index																			
WEST CALIFORNIA																																							
ARVIN																																							
ACALA SJ-2																																							
100 PERCENT																																							
SLM+	40	36	127	47	6.1	4.7		100	80	19	14	75	72.1	11.8	102	88.4	2.8	114	25.7	26.2	107																		
SLM	41	36	127	45	6.1	4.5		90	70	21	13	74	72.5	10.6	99	91.1	3.2	119	26.4	25.6	104																		
SLM	41	36	123	44	5.8	4.4		100	80	21	15	69	71.5	10.9	98	84.8	3.2	104	29.0	25.3	97																		
BAKERSFIELD																																							
ACALA SJ-2																																							
100 PERCENT																																							
M	31	35	132	46	5.7	4.7		100	70	23	18	71	70.3	10.7	96	88.2	2.8	114	25.5	26.2	108																		
SLM	41	35	130	43	6.0	4.6		90	70	22	16	65	69.4	10.9	95	83.0	3.1	100	27.9	25.4	100																		
SLM	41	35	119	43	6.0	4.8		90	70	23	18	68	71.3	10.4	97	83.4	3.1	101	28.0	25.6	100																		
BUTTONWILLOW																																							
ACALA SJ-2																																							
100 PERCENT																																							
M	31	35	127	44	6.0	4.4		80	70	30	20	68	71.3	11.3	99	86.4	3.1	108	26.4	25.8	104																		
M	31	35	124	43	5.6	4.3		90	60	27	18	63	71.8	11.1	99	83.9	3.0	103	27.3	25.7	102																		
SLM	41	34	109	38	5.8	4.3		70	60	40	33	58	69.9	10.3	93	85.3	3.7	103	28.2	24.7	96																		
CANTUA CREEK																																							
ACALA SJ-2																																							
100 PERCENT																																							
M	31	36	128	46	6.5	5.3		90	70	35	26	71	72.3	11.1	100	84.7	3.5	102	28.1	25.1	98																		
SLM+	40	36	129	48	6.4	5.3		90	70	30	23	78	71.7	10.6	98	84.6	3.3	103	28.7	25.0	97																		
SLM+	40	35	125	50	5.8	4.7		70	60	29	22	72	72.7	10.5	99	83.2	3.1	101	26.8	25.2	101																		
CORCORAN																																							
ACALA SJ-2																																							
90 PERCENT																																							
SLM	41	36	129	47	5.8	4.8		90	70	23	16	67	70.6	11.1	97	80.1	3.4	92	27.0	26.0	104																		
SLM	41	36	123	42	6.4	4.7		90	70	17	12	66	71.5	10.6	98	82.5	3.3	98	27.5	25.7	102																		
SLM	41	35	125	45	6.2	4.9		110	90	11	10	66	71.0	11.4	99	85.2	3.2	105	26.8	26.6	107																		
DOS PALOS																																							
ACALA SJ-2																																							
97 PERCENT																																							
M	31	36	136	50	6.0	4.6		100	70	18	16	80	71.6	10.6	98	83.8	2.9	103	26.5	26.4	107																		
SLM+	40	36	138	51	6.3	5.1		100	90	15	11	79	71.6	10.4	97	83.2	3.2	100	28.2	25.4	99																		
SLM	41	36	140	51	6.0	4.7		100	80	20	14	82	68.5	11.2	94	84.8	3.2	104	27.2	24.3	97																		
HANFORD																																							
ACALA SJ-2																																							
95 PERCENT																																							
M	31	35	123	45	5.4	4.4		70	60	37	26	73	69.4	11.0	95	87.9	3.1	112	26.6	25.1	101																		
M	31	35	131	47	5.8	4.4		90	70	30	18	74	71.2	11.4	99	83.5	3.0	102	27.1	25.5	102																		
SLM	41	35	126	43	6.0	4.6		100	70	22	15	69	70.0	10.7	95	84.3	3.5	102	28.5	25.6	99																		

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification		Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	Code	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color	
Name		32d in.	In.	Pct.	Rdgs.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.
WEST CALIFORNIA HURON													
ACALA SJ-3													
M	31	36	1.14	45	4.2	92	27	5.8	1.2	2.2	0	104	5.5
SLM+	40	36	1.13	46	4.3	90	27	5.8	1.6	2.7	1	102	5.6
SLM+	40	35	1.14	45	4.1	95	28	5.8	1.5	2.5	1	104	6.7
LEMOORE													
ACALA SJ-4													
SLM+	40	36	1.12	45	4.0	97	27	5.2	1.3	2.8	1	101	5.8
SLM+	40	36	1.12	45	4.2	98	26	5.5	1.8	2.5	1	102	5.1
SLM+	40	35	1.14	45	4.2	95	28	6.1	1.1	1.8	0	105	6.1
LOST HILLS													
ACALA SJ-3													
M	31	35	1.06	46	4.4	94	27	6.8	1.5	2.1	0	104	4.6
SLM	41	35	1.15	48	3.9	90	27	6.2	1.7	2.5	2	99	5.0
SLM	41	35	1.09	45	4.3	95	27	5.9	1.3	2.3	1	103	6.6
ORANGE COVE													
ACALA SJ-2													
M	31	36	1.14	47	3.9	94	27	5.8	0.9	1.9	0	105	5.3
M	31	36	1.12	46	3.7	97	26	6.0	1.0	2.0	0	106	5.4
SLM+	40	36	1.15	45	3.2	92	26	6.1	1.6	2.6	0	104	7.2
SHAFTER													
ACALA SJ-2													
M	31	36	1.13	48	4.1	101	29	5.1	1.4	2.0	1	104	3.7
SLM	41	36	1.15	47	3.9	94	27	6.0	1.6	2.4	1	103	5.2
SLM	41	36	1.15	46	4.1	92	26	5.9	1.5	2.3	1	101	5.2
STRATFORD													
ACALA SJ-2													
M	31	35	1.13	47	4.6	95	27	6.1	1.0	1.5	1	102	4.2
SLM	41	35	1.09	47	4.5	93	27	6.0	1.9	2.6	1	103	5.3
SLM	41	35	1.12	47	3.8	91	26	6.4	1.7	2.8	2	100	5.5
STRATHMORE													
ACALA SJ-4													
SLM	41	35	1.13	46	4.0	97	27	5.8	1.9	2.6	1	103	4.5
SLM	41	36	1.11	46	3.7	95	27	6.1	1.5	2.5	1	102	5.9
SLM	41	35	1.10	45	3.9	102	28	5.6	1.5	2.4	1	101	5.0

* 100 percent selected for tests, less than 100 percent in the area

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

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State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin- ning Poten- tial	Color - 22s gray yarn			Color-22s blichd. yarn			Color - 22s dyed yarn		
			22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Index	No.		No.	Rd	+b	Index	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
Grade	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WEST CALIFORNIA																				
HURON																				
100 PERCENT																				
M	31	36	128	45	6.4	4.8	100	70	21	17	72	71.4	10.9	98	84.2	3.0	103	26.7	25.9	104
SLM+	40	36	122	44	6.0	4.5	90	70	18	14	69	70.0	11.2	97	84.0	3.3	102	28.1	25.5	100
SLM+	40	35	128	46	5.8	4.8	110	80	18	14	70	71.6	11.5	100	85.5	3.1	106	26.7	25.2	101
LEMOORE																				
100 PERCENT *																				
ACALA SJ-4																				
SLM+	40	36	123	47	5.5	4.6	100	80	16	13	70	71.7	10.7	98	83.5	3.1	101	27.0	26.2	105
SLM+	40	36	136	49	5.9	4.5	100	90	14	12	76	70.8	10.8	97	85.1	3.3	104	28.2	25.6	100
SLM+	40	35	132	49	5.6	5.0	100	80	13	10	78	73.1	10.7	100	84.6	3.0	104	26.9	24.8	99
LOST HILLS																				
100 PERCENT																				
ACALA SJ-3																				
M	31	35	124	46	6.1	4.5	100	70	18	14	70	71.9	10.9	99	82.1	3.3	97	26.8	26.1	105
SLM	41	35	136	50	6.4	5.3	100	80	17	15	82	68.3	10.6	91	84.1	3.3	102	27.2	25.5	102
SLM	41	35	130	46	6.3	4.8	100	80	23	15	75	71.7	10.4	97	84.5	3.5	102	28.6	25.4	98
ORANGE COVE																				
100 PERCENT																				
ACALA SJ-2																				
M	31	36	136	49	6.5	4.9	90	70	24	17	74	71.9	11.0	99	83.2	3.0	101	27.0	25.9	104
M	31	36	133	47	6.1	4.8	90	80	16	15	73	73.2	10.6	100	84.0	3.3	102	26.7	25.1	101
SLM+	40	36	129	49	6.0	4.9	80	60	27	20	76	72.4	11.0	100	84.0	3.1	102	27.1	25.0	100
SHAFTER																				
100 PERCENT																				
ACALA SJ-2																				
M	31	36	132	49	5.3	4.4	90	60	29	20	76	69.9	11.6	98	84.8	3.4	103	26.8	25.1	101
SLM	41	36	124	49	5.8	4.8	90	80	21	16	78	70.3	11.2	97	87.5	2.9	111	26.6	25.5	103
SLM	41	36	129	47	6.6	4.8	90	70	24	19	75	69.8	10.8	95	84.4	3.1	103	27.2	26.0	104
STRATFORD																				
96 PERCENT																				
ACALA SJ-2																				
M	31	35	137	50	6.1	4.5	110	90	14	11	79	70.3	11.3	98	87.0	3.1	110	24.5	26.7	112
SLM	41	35	131	49	6.2	4.8	80	70	29	26	75	69.9	10.8	95	83.5	3.5	100	26.7	25.9	104
SLM	41	35	136	51	6.3	5.5	100	80	16	10	89	70.7	11.3	98	84.1	3.1	103	26.1	25.4	103
STRATHMORE																				
85 PERCENT																				
ACALA SJ-4																				
SLM	41	35	135	50	5.4	4.5	90	70	34	25	72	70.2	10.6	95	87.2	3.0	110	27.2	25.0	100
SLM	41	36	138	50	5.8	4.6	90	70	35	26	74	69.7	10.4	93	85.1	3.5	103	28.6	24.8	96
SLM	41	35	132	50	6.1	4.8	90	70	34	23	75	70.5	10.3	95	82.6	3.1	99	27.4	25.6	102

* 100 percent selected for tests, less than 100 percent in the area

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification		Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	Code	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color	
Name	32d in.	In.	Pct.	Edg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
WEST CALIFORNIA													
TRANQUILITY													
ACALA SJ-2													
M	31	36	1.15	46	3.7	96	26	1.0	1.8	0	3	107	5.3
SLM+	40	36	1.14	46	4.0	91	27	1.3	2.0	0	2	104	6.3
SLM	41	35	1.08	43	3.4	95	25	0.8	1.7	2	3	100	7.1
VISALIA													
ACALA SJ-2													
M	31	35	1.13	46	4.2	92	27	1.0	1.8	0	3	106	5.7
SLM	41	35	1.13	46	4.1	93	28	1.7	2.4	1	2	101	5.4
SLM+	40	35	1.14	46	3.8	92	28	1.2	1.8	1	2	103	6.7
WASCO													
ACALA SJ-2													
M	31	35	1.11	47	3.9	93	27	1.4	1.9	0	3	105	4.5
M	31	36	1.15	47	4.1	92	27	1.2	2.1	1	3	104	4.2
SLM	41	35	1.11	44	3.7	91	26	1.6	2.6	1	2	101	5.5
WESTMORLAND													
DELTAPINE 61													
M	31	34	1.06	45	5.5	94	25	1.2	2.1	1	2	103	6.9
M	31	35	1.09	45	4.8	89	24	1.2	1.7	0	2	106	4.6
M	31	34	1.06	44	4.6	91	24	1.2	1.9	0	2	103	4.5

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprctns.		Spin- ning Poten- tial	Color - 22s gray yarn			Color-22s blichd. yarn			Color - 22s dyed yarn					
Grade	Code	32d In.	Lbs.	Lbs.	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Index	Index	Index	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
WEST CALIFORNIA TRANQUILITY																							
ACALA SJ-2																							
99 PERCENT																							
M		31	36	135	51	6.2	5.1	100	70	22	18	80	73.5	10.9	102	83.9	3.2	102	27.1	25.8	103		
SLM+		40	36	133	49	5.9	5.0	110	80	15	13	81	72.4	10.5	99	83.1	3.1	100	27.5	26.0	103		
SLM		41	35	128	44	6.3	4.7	80	70	22	18	75	69.6	10.8	95	84.6	3.2	103	26.7	25.1	101		
VISALIA																							
ACALA SJ-2																							
85 PERCENT																							
M		31	35	122	45	6.0	4.8	90	70	25	17	68	70.0	10.5	94	86.1	3.2	107	28.5	25.7	100		
SLM		41	35	126	44	6.4	5.0	100	70	22	16	71	71.3	10.8	98	84.4	3.3	103	28.3	25.7	100		
SLM+		40	35	132	48	6.3	4.7	80	70	21	15	76	71.1	10.0	95	83.6	3.1	102	26.9	25.6	103		
WASCO																							
ACALA SJ-2																							
100 PERCENT																							
M		31	35	132	47	5.9	4.6	80	60	34	30	75	70.8	10.9	97	84.5	3.0	104	26.1	25.5	104		
M		31	36	128	46	5.8	4.5	80	70	21	13	71	71.5	11.1	99	91.2	3.0	120	26.7	25.0	101		
SLM		41	35	125	43	6.3	4.4	90	60	28	24	70	71.3	10.3	96	85.7	3.6	104	28.9	24.7	95		
WESTMORLAND																							
DELTAPINE 61																							
100 PERCENT																							
M		31	34	104	32	5.1	3.7	100	80	38	25	49	71.4	10.3	97	85.1	2.9	106	26.8	25.9	104		
M		31	35	114	38	6.0	4.3	110	90	14	10	56	75.0	9.6	100	84.1	3.0	103	26.5	26.4	107		
M		31	34	106	34	5.6	4.2	100	70	23	13	55	70.3	10.2	94	82.3	3.0	99	26.2	25.6	104		

Table 7.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1975

State, Production Area, Chronological sampling and Classification	Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	2.5% span length	50/2.5 unif.	Rdg.	Zero Gage	1/8" Gage	Pct.	Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color	
Name	Code	32d in.	In.	Pct.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH EAST												
ALABAMA												
GERALDINE												
COKER 310												
SLM LT SP 42	34	1.10	42	3.6	87	23	7.2	3.2	3	4	95	7.6
LM 51	33	1.03	42	3.7	82	21	7.1	3.7	2	3	97	9.5
LM 51	33	1.09	42	3.7	83	21	6.4	4.5	3	3	91	8.5
ORRVILLE												
COKER 310												
LM 51	34	1.10	40	4.2	84	22	6.6	3.9	3	3	92	10.4
LM 51	34	1.09	41	4.1	85	23	6.5	4.6	3	3	94	10.8
LM LT SP 52	34	1.10	41	4.1	83	24	6.0	3.6	4	3	89	9.4
GEORGIA												
COMER												
COKER 310												
SLM LT SP 42	35	1.06	43	4.2	89	23	5.8	3.3	4	4	89	10.6
LM 51	34	1.08	44	4.4	81	23	6.3	3.6	4	3	90	9.2
LM LT SP 52	34	1.09	45	4.5	87	23	6.3	3.2	4	3	89	8.9
MADISON												
COKER 310												
SLM LT SP 42	34	1.08	44	4.5	86	22	6.7	4.8	3	3	94	10.2
SLM LT SP 42	34	1.08	43	4.4	85	23	6.1	4.0	3	3	94	10.7
SLM LT SP 42	34	1.07	42	4.3	85	22	6.2	5.4	4	3	90	10.6
NORTH CAROLINA												
SCOTLAND NECK												
COKER 310												
LM LT SP 52	35	1.11	43	4.1	86	22	5.5	4.2	5	3	83	10.3
LM 51	35	1.10	43	4.4	86	22	5.5	3.8	4	3	89	9.9
LM 51	35	1.13	45	4.6	88	25	5.7	3.4	3	3	91	8.9
SOUTH CAROLINA												
HARTSVILLE												
COKER 310												
SLM 41	36	1.15	45	4.1	83	24	5.4	2.9	3	3	96	7.7
SLM 41	35	1.11	43	4.0	85	21	6.0	2.5	3	2	95	10.5
SLM 41	34	1.11	44	4.4	82	22	5.8	2.5	2	2	96	8.5
SOUTH CENTRAL												
MISSISSIPPI												
LAKE CORMORANT												
COKER 310												
SLM 41	38	1.15	43	4.1	90	25	5.5	3.6	2	2	100	8.0
LM+ 50	37	1.17	43	3.7	91	24	5.9	3.9	1	2	100	9.6
LM 51	36	1.12	42	3.7	87	23	5.5	4.7	2	2	96	8.8

Table 7a.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1975

State, Production Area, Chronological sampling, and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprftms.		Spin- ning Poten- tial	Color - 22s gray yarn			Color-22s blechd. yarn			Color - 22s dyed yarn				
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Index	Index	No.	No.		50s or 12 tex	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite	
Grade	Staple					Pct.	Pct.														
Name	Code	32d In.	Lbs.	Lbs.				Index	Index	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index	
SOUTH EAST																					
ALABAMA																					
GERALDINE																					
COKER 310																					
100 PERCENT																					
SLM	LT SP	42	34	91	30	5.3	4.0	100	70	40	24	56	65.1	11.3	87	92.5	3.2	122	27.0	25.4	102
LM		51	33	97	28	5.4	4.4	110	90	12	10	55	68.9	10.8	93	86.2	3.1	108	27.5	25.6	101
LM		51	33	94	28	5.3	3.8	110	90	14	10	55	65.5	10.7	86	82.6	2.9	100	27.0	25.8	103
ORRVILLE																					
COKER 310																					
98 PERCENT																					
LM		51	34	87	27	4.9	3.5	110	70	12	11	50	67.0	10.6	88	86.5	3.0	109	27.5	25.7	102
LM		51	34	94	28	5.1	3.8	100	70	24	20	50	68.7	10.7	92	91.4	3.5	118	27.0	25.6	102
LM	LT SP	52	34	91	29	5.0	4.0	90	70	33	22	53	65.8	11.0	87	85.5	3.1	106	27.3	25.1	100
GEORGIA																					
COKER																					
COKER 310																					
100 PERCENT																					
SLM	LT SP	42	35	85	25	4.7	3.4	100	70	19	14	51	64.9	10.8	85	84.4	4.1	99	29.6	24.8	94
LM		51	34	91	27	5.1	3.7	130	90	11	9	53	73.1	10.4	99	84.7	3.0	104	26.5	26.4	107
LM	LT SP	52	34	93	30	4.8	3.6	130	90	14	9	55	65.1	11.1	86	83.3	3.0	101	28.5	24.4	95
MADISON																					
COKER 310																					
100 PERCENT																					
SLM	LT SP	42	34	85	29	4.7	3.8	110	80	21	16	51	64.5	11.4	86	91.4	3.3	119	26.5	25.4	103
SLM	LT SP	42	34	79	25	4.5	3.6	110	80	17	14	48	66.9	10.8	89	84.5	3.3	103	29.7	25.3	96
SLM	LT SP	42	34	83	25	4.8	3.5	110	90	18	15	50	64.8	10.8	85	84.0	3.5	101	29.1	24.7	95
NORTH CAROLINA																					
SCOTLAND NECK																					
COKER 310																					
95 PERCENT																					
LM	LT SP	52	35	89	27	4.6	3.0	100	70	31	25	48	63.3	9.9	80	84.3	3.2	103	29.9	25.1	95
LM		51	35	92	29	4.9	3.6	110	80	24	16	54	63.9	9.8	81	83.6	2.9	102	28.8	25.4	98
LM		51	35	100	34	5.3	4.2	100	90	20	14	59	65.1	10.2	84	85.4	3.2	105	28.1	25.1	98
SOUTH CAROLINA																					
HARTSVILLE																					
100 PERCENT																					
SLM		41	36	106	31	5.4	4.0	120	80	14	13	71	66.3	11.0	88	85.3	3.3	105	28.1	25.5	100
SLM		41	35	95	29	5.3	3.6	120	90	14	13	56	69.1	10.1	91	88.5	2.6	115	27.6	25.3	100
SLM		41	34	93	28	5.1	3.8	120	80	11	10	54	67.1	10.0	87	84.3	2.9	104	28.6	25.7	100
SOUTH CENTRAL																					
MISSISSIPPI																					
LAKE COKORANT																					
COKER 310																					
100 PERCENT																					
SLM		41	38	119	43	5.8	4.5	120	90	12	10	74	68.3	10.2	90	86.8	3.0	109	26.9	26.5	106
LM+		50	37	119	41	5.7	4.6	90	70	23	20	69	70.8	10.3	95	88.2	2.8	114	26.1	25.4	103
LM		51	36	105	36	5.1	4.1	100	70	30	22	63	68.5	9.9	89	83.6	3.2	101	28.6	25.3	98

Table 7.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1975 --Continued

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste		
Grade	Code	Staple 32d in.	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray- ness	Yellow- ness	Composite color			
					In.			Pct.							Rdg.	Mpsi
SOUTH CENTRAL																
TENNESSEE																
TRENTON																
COKER 310																
LM	51	34	1.10	43	4.3	88	22	6.2		3.3	4.2	3	3	94	9.7	
SLM	41	34	1.05	43	4.3	82	21	7.8		2.2	3.1	2	3	100	9.5	
LM	51	33	1.05	42	4.2	87	23	6.1		2.2	3.2	3	3	93	9.9	
WESTERN																
ARIZONA																
DUNCAN																
ACALA 1517-70																
M	31	37	1.16	45	3.7	93	28	5.7		1.7	2.4	1	3	104	7.6	
SLM+	40	37	1.17	44	3.2	91	24	5.8		2.7	3.7	0	3	105	9.6	
NEW MEXICO																
ARTESIA																
ACALA 1517-V																
M	31	37	1.20	46	3.8	96	28	6.4		1.4	2.0	0	2	104	6.9	
M	31	36	1.16	44	3.2	97	30	5.5		1.4	2.2	0	3	105	7.1	
M	31	36	1.17	44	3.0	93	27	6.0		1.7	2.5	0	2	106	8.0	
ARTESIA																
ACALA 1517-70																
M	31	36	1.15	46	4.0	100	25	5.7		1.1	1.9	1	3	103	8.3	
M	31	36	1.17	45	3.5	94	26	5.9		1.6	2.6	0	3	104	7.5	
M	31	36	1.11	43	2.8	92	25	5.6		1.7	2.8	0	2	105	8.9	
BERINO																
ACALA 1517-70																
M	31	36	1.15	45	3.8	93	27	6.0		1.2	1.8	0	2	104	7.3	
M	31	36	1.15	44	2.9	97	26	6.1		1.4	2.3	0	2	106	8.6	
SLM	41	36	1.15	42	2.6	87	26	6.3		3.0	4.3	0	2	104	9.9	
TULAROSA																
ACALA 1517-V																
LM+	50	37	1.18	45	3.4	93	26	6.3		4.4	5.6	1	2	101	10.4	
SLM	41	37	1.19	46	3.3	88	26	6.5		3.6	4.9	1	3	101	10.5	
LM+	50	37	1.19	46	3.3	90	26	6.1		4.9	6.2	1	3	100	12.3	
WEST TEXAS																
TORNILLO																
ACALA 1517-C																
M	31	37	1.19	46	3.8	96	25	5.3		0.9	1.8	1	3	102	6.5	
M	31	37	1.17	44	3.1	93	25	6.1		1.7	2.4	0	2	105	7.3	
SLM	41	37	1.14	42	3.0	92	24	5.7		2.9	3.8	1	2	103	10.7	

Table 7a.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1975--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfrctns.		Spin- ning Poten- tial	Color - 22s gray yarn		Color-22s blchd. yarn		Color - 22s dyed yarn					
			22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Index	Index		No.	No.	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
Grade	Staple		Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.		Rd	+b	Index	Rd	+b	Index	Rd	-b	Index	
SOUTH CENTRAL																					
TENNESSEE																					
TRENTON																					
COKER 310																					
LM		51	34	103	30	5.3	3.7	110	90	24	18	60	68.4	10.8	92	88.2	3.0	113	26.3	26.0	105
SLM		41	34	88	26	4.9	3.6	120	100	11	9	51	70.6	10.4	95	87.9	2.8	113	26.8	26.2	105
LM		51	33	88	27	5.0	3.5	120	80	15	12	53	64.9	10.4	84	85.0	3.4	104	27.9	25.8	101
WEST																					
ARIZONA																					
DUNCAN																					
ACALA 1517-70																					
M		31	37	136	51	6.0	5.3	100	80	18	19	81	70.4	11.7	99	85.4	3.4	105	27.9	25.9	102
SLM+		40	37	138	52	5.7	4.8	80	60	33	26	93	70.1	11.1	97	83.5	2.9	102	25.9	26.1	107
NEW MEXICO																					
ARTESIA																					
ACALA 1517-V																					
M		31	37	143	54	6.0	4.7	90	70	25	19	90	72.8	11.1	101	93.3	3.1	124	25.5	25.6	105
M		31	36	138	53	6.1	5.0	80	60	49	42	94	72.9	10.8	100	84.7	3.2	104	26.7	25.8	104
M		31	36	136	51	5.9	5.1	70	60	43	26	89	69.9	10.7	95	85.0	3.0	105	26.5	24.7	100
ARTESIA																					
ACALA 1517-70																					
M		31	36	134	49	5.7	4.6	120	90	17	12	77	70.1	11.5	98	87.0	2.9	110	25.4	26.2	108
M		31	36	140	51	6.4	4.9	100	70	27	22	86	71.2	11.1	98	83.4	3.4	100	25.7	26.3	108
M		31	36	131	49	6.0	4.9	80	60	26	24	90	71.5	10.4	97	83.2	2.9	101	25.8	25.4	104
BERINO																					
ACALA 1517-70																					
M		31	36	140	50	6.5	4.9	100	70	35	28	80	69.9	10.7	95	84.0	3.0	103	25.9	26.6	109
M		31	36	136	50	6.3	5.0	70	60	31	27	90	74.0	10.2	100	86.3	3.7	105	27.9	25.5	100
SLM		41	36	129	48	6.4	4.8	60	60	67	49	90	70.7	10.3	95	84.4	3.1	103	26.2	25.6	104
TULAROSA																					
ACALA 1517-V																					
100 PERCENT																					
LM+		50	37	139	52	6.5	5.4	70	60	52	44	91	70.1	10.9	96	85.0	3.2	104	26.3	25.8	105
SLM		41	37	141	52	6.3	5.0	70	60	66	43	92	65.8	11.1	87	84.5	3.2	103	25.8	26.1	107
LM+		50	37	143	55	6.5	5.3	60	60	83	65	94	68.2	10.8	92	83.2	3.4	99	26.3	25.0	101
WEST TEXAS																					
TORNILLO																					
ACALA 1517-C																					
99 PERCENT																					
M		31	37	147	54	5.8	4.5	100	80	23	17	92	69.1	10.8	94	83.6	3.2	101	26.3	26.6	108
M		31	37	139	52	6.2	5.2	90	70	20	17	89	72.4	10.4	98	86.8	3.2	109	27.4	25.8	102
SLM		41	37	138	50	5.8	4.8	60	60	49	45	91	68.3	10.1	89	81.7	3.1	97	26.1	24.7	101

Table 7b.--Cotton: Combed yarn processing test results for long staple varieties, by state and market area for samples of modal quality, collected at triweekly intervals, crop of 1975

State, Production Area, Chronological Sampling and Classification				Comber waste		Yarn skein strength			Yarn elongation			Yarn appearance			Yarn imperfections		
Grade		Staple		Pct.		Lbs.	Lbs.	No.	Pct.	Pct.	Index	Index	Average	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
Name	Code	32d in.															
SOUTH EAST																	
ALABAMA																	
GERALDINE																	
	SLM LT SP 42	34	18.8	118	40	2298	6.2	4.3	100	80	90	24	15				
	LM 51	33	19.3	116	41	2301	6.0	4.7	130	110	120	7	5				
	LM 51	33	1/														
ORRVILLE																	
	LM 51	34	20.2	115	41	2290	5.5	4.2	120	100	110	6	4				
	LM 51	34	21.0	117	40	2287	5.5	4.3	100	80	90	16	12				
	LM LT SP 52	34	1/														
GEORGIA																	
COMER																	
	SLM LT SP 42	35	18.4	113	39	2218	5.9	4.1	120	90	105	9	9				
	LM 51	34	18.6	117	42	2337	5.6	4.6	130	100	115	6	6				
	LM LT SP 52	34	18.7	110	42	2260	5.4	4.4	130	110	120	7	3				
MADISON																	
	SLM LT SP 42	34	18.6	112	40	2232	5.5	4.5	120	100	110	8	6				
	SLM LT SP 42	34	19.6	105	36	2055	5.5	4.3	120	90	105	8	5				
	SLM LT SP 42	34	20.9	109	39	2174	5.2	4.3	120	100	110	8	6				
NORTH CAROLINA																	
SCOTLAND NECK																	
	LM LT SP 52	35	18.4	112	39	2207	5.7	4.4	110	90	100	14	10				
	LM 51	35	18.8	116	40	2276	5.3	4.0	110	100	105	11	8				
	LM 51	35	16.8	125	45	2500	5.8	4.5	120	100	110	19	14				
SOUTH CAROLINA																	
HARTSVILLE																	
	SLM 41	36	15.5	125	43	2450	5.9	4.5	120	100	110	8	3				
	SLM 41	35	18.7	120	43	2395	5.8	4.5	120	90	105	9	7				
	SLM 41	34	18.5	112	40	2232	5.5	4.3	120	100	110	8	6				
SOUTH CENTRAL																	
MISSISSIPPI																	
LAKE CORMORAN																	
	SLM 41	38	17.7	133	49	2688	6.2	4.9	130	110	120	6	5				
	LM+ 50	37	17.6	141	52	2851	6.5	4.7	110	100	105	11	10				
	LM 51	36	18.4	130	47	2605	5.9	4.8	100	90	95	15	11				

$\frac{1}{2}$ Insufficient cotton to run comber tests

Table 7b.--Cotton: Combed yarn processing test results for long staple varieties, by state and market area for samples of modal quality, collected at triweekly intervals, crop of 1975

State, Production Area, Chronological Sampling and Classification			Comber waste		Yarn skein strength			Yarn elongation			Yarn appearance			Yarn imperfections				
Grade	Code	32d in.	Pct.	Lbs.	Lbs.	No.	Average Break Factor	22s or 27 tex	50s or 12 tex	Pct.	22s or 27 tex	50s or 12 tex	Pct.	22c or 27 tex	50s or 12 tex	Average	22s or 27 tex	50s or 12 tex
SOUTH CENTRAL																		
TENNESSEE																		
TRENTON																		
COKER 310																		
LM	51	34	19.2	122	44	2442	5.5	4.5	130	100	115	10	6					
SLM	41	34	16.8	110	37	2135	5.5	4.6	130	110	120	5	3					
LM	51	33	19.0	116	41	2301	5.8	4.7	130	90	110	7	6					
WEST																		
ARIZONA																		
DUNCAN																		
M	31	37	14.6	155	59	3180	6.1	5.3	110	100	105	10	8					
SLM+	40	37	1/															
NEW MEXICO																		
ARTESIA																		
M	31	37	15.3	162	62	3332	6.2	5.0	100	70	85	16	10					
M	31	36	16.3	160	63	3335	6.4	5.5	100	70	85	26	18					
M	31	36	17.1	157	61	3252	6.4	5.4	80	70	75	24	20					
ARTESIA																		
ACALA 1517-70																		
M	31	36	15.9	156	60	3216	5.9	4.9	130	100	115	6	3					
M	31	36	16.4	159	60	3249	6.7	5.3	100	90	95	11	10					
M	31	36	18.6	155	60	3205	6.4	5.4	90	70	80	20	15					
BERINO																		
ACALA 1517-70																		
M	31	36	15.3	158	61	3263	7.0	5.6	100	90	95	17	13					
M	31	36	16.8	156	75	3591	6.8	5.7	100	70	85	18	13					
SLM	41	36	19.8	147	57	3042	6.2	5.3	60	60	60	63	49					
TULAROSA																		
ACALA 1517-V																		
LM+	50	37	16.1	157	61	3252	6.7	5.7	90	70	80	27	21					
SLM	41	37	16.0	160	61	3285	6.5	5.4	90	70	80	31	28					
LM+	50	37	15.0	164	64	3404	6.7	5.5	90	70	80	32	29					
WEST TEXAS																		
TORNILLO																		
ACALA 1517-C																		
M	31	37	14.1	166	63	3401	6.1	5.0	120	100	110	9	7					
M	31	37	14.0	156	60	3216	6.5	5.9	100	70	85	13	10					
SLM	41	37	16.3	156	60	3216	6.1	5.1	80	60	70	31	23					

1/ Insufficient cotton to run comber tests

1/ Insufficient cotton to run comber tests

Table 8.--Cotton: American upland extra long staple: Quality characteristics by production areas, crop of 1975

State, Production Area, Chronological Sampling and Classification		Array length		Micro- naire		Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Comber waste
Grade	Staple	Upper Quartile	Coeff. of Var'n	Pct.	Rdg.	Mpsi	G/tex		Visible waste	Total waste	Gray- ness	Yellow- ness	Com- posite		
32d in.		In.		Pct.				Pct.	Pct.	Pct.	No.	No.	Index	Pct.	Pct.
WEST															
ARIZONA															
<u>Bowie</u>															
3	44	1.50	29	4.1	103	34	93 Percent	8.0	1.1	1.9	4	5	92	7.4	18.0
3	44	1.45	32	3.6	105	33		7.7	1.3	2.0	4	5	91	8.5	18.1
3	44	1.41	33	3.5	103	34		6.7	2.6	4.1	4	6	89	6.2	17.4
<u>Peoria</u>															
100 Percent															
3	44	1.50	30	3.9	111	34		6.8	1.6	3.4	3	5	94	6.8	16.9
3	44	1.50	30	4.0	104	36		7.0	2.4	5.2	3	5	96	6.7	19.4
4	44	1.46	32	3.5	107	32		6.9	2.5	3.6	3	4	91	7.2	17.5
<u>Stanfield</u>															
100 Percent															
4	46	1.49	32	3.7	104	35		7.7	2.1	3.4	3	5	93	8.0	18.0
4	46	1.50	32	3.4	103	31		7.4	1.8	3.1	4	5	90	7.0	18.9
4	44	1.49	34	3.7	105	35		7.5	1.8	3.2	4	4	88	6.8	16.5
<u>Las Cruces</u>															
100 Percent															
3	44	1.47	30	3.8	101	34		7.4	1.9	2.1	4	5	91	7.5	17.1
3	44	1.48	31	3.4	106	32		7.6	1.7	2.4	3	5	95	7.2	21.5
5	44	1.47	31	3.2	104	35		6.6	2.4	3.1	4	5	87	7.5	20.9
<u>El Paso</u>															
99 Percent															
3	44	1.45	31	3.8	102	33		7.3	2.1	2.9	3	5	93	8.1	17.9
3	44	1.43	32	3.2	104	35		6.6	1.4	2.0	4	5	90	7.4	18.7
4	44	1.43	34	2.9	98	31		6.9	4.0	5.5	4	6	87	8.8	19.6

Table 8.--Cotton, American Pima extra long staple: Quality characteristics by production area, crop of 1975--(Continued)

State, Production Area, Chronological Sampling and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 50s gray yarn			Color-50s bleached yarn			Color - 50s dyed yarn		
Grade	Staple	50s or 12 tex	80s or 7.4 tex	50s or 12 tex	80s or 7.4 tex	50s or 12 tex	80s or 7.4 tex	50s or 12 tex	80s or 7.4 tex	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
32d in.		Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WEST																		
ARIZONA																		
Bowle																		
93 Percent																		
3	44	63	34	5.6	5.0	120	120	1	2	64.1	13.0	90	83.2	4.0	97	28.1	26.1	102
3	44	66	35	5.5	4.8	110	120	1	2	62.4	12.8	85	84.6	3.6	102	26.0	25.9	106
3	44	64	34	5.5	4.5	100	110	2	2	62.2	12.8	85	82.9	3.4	99	24.9	26.2	109
100 Percent																		
Peoria																		
99 Percent																		
3	44	74	36	5.5	4.6	110	120	1	1	65.1	12.3	90	83.5	3.0	102	26.5	27.5	111
3	44	71	37	5.1	4.5	110	110	2	1	64.6	12.4	89	79.0	2.9	91	27.1	25.9	103
4	44	70	38	5.5	4.8	110	120	3	2	63.4	12.9	88	80.3	3.2	93	26.1	26.3	107
100 Percent																		
Stanfield																		
99 Percent																		
4	46	71	38	5.5	4.5	110	120	3	1	62.2	12.6	85	82.6	3.6	97	25.2	26.7	110
4	46	70	38	5.6	5.0	100	100	4	3	62.5	13.2	87	81.6	3.2	96	25.0	26.2	109
4	44	70	37	5.4	4.4	110	110	2	3	63.6	12.4	87	82.9	3.4	99	26.2	27.2	110
81 Percent																		
Las Cruces																		
99 Percent																		
3	44	66	36	5.7	4.8	110	120	2	1	62.2	12.4	84	83.8	4.5	96	27.5	26.4	105
3	44	64	35	5.3	4.4	110	120	2	1	64.1	13.1	90	83.3	3.4	100	26.0	26.4	108
5	44	63	31	5.4	4.8	90	90	7	6	61.0	12.9	83	82.1	3.8	95	26.6	25.1	101
WEST TEXAS																		
El Paso																		
99 Percent																		
3	44	64	34	5.2	4.4	110	120	2	2	63.6	12.5	87	83.2	4.6	95	27.6	26.2	104
3	44	67	33	5.3	4.2	110	110	2	3	63.5	13.6	91	84.0	3.4	101	26.1	26.2	107
4	44	65	35	5.3	4.4	100	100	5	6	60.5	13.0	82	82.4	3.5	97	26.0	25.0	102

Table 9.--Ootton: Results of simple correlation analyses for the fiber and processing tests performed on 65 short staple samples collected at triweekly intervals from selected gin points, crop of 1975

Item	Grade	Staple	Fiber length		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Spinning Potential
			2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Visible waste	Total waste	Gray- ness	Yellow- ness	Com- posite		
	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.	No.
Sample Distribution:															
Mean.....	91.0	30.8	.95	44.8	3.6	85.0	21.5	6.4	2.60	3.92	1.9	3.8	98.9	6.6	43.2
Standard deviation (+).....	4.9	1.4	.07	1.3	.6	4.5	1.2	.6	.99	1.36	.7	.5	2.4	1.2	7.5
Correlation Coef. for:															
Classification:															
Grade.....index															
Staple.....32d inches	+17		+93	-10	+57	-02	+60	-04	-35	-49	-18	+15	+13	-73	+82
Fiber length:															
2.5% span.....inches	+93	+11		+22	+58	+46	+07	-39	-58	-53	-68	-22	+71	-52	-10
50/2.5.....pct	-10	+22	-18		+49	-02	+67	-03	-33	-47	-08	+21	+08	-69	+86
Micronaire.....reading	+57	+58	+49	+45	+45	+31	+05	-19	-09	-11	-28	-13	+22	-07	+27
Fiber strength:															
Zero gage.....Mpsi	-02	+46	-02	+20	+31		+39	-68	-20	-22	-20	+02	+26	-10	-13
1/8" gage.....grams/tex	+60	+07	+67	+05	+34	+39		-24	-16	-29	+06	+20	-09	-44	+61
Elongation (1/8").....pct	-04	-39	-03	-19	-44	-68	-24		+19	+25	+22	+20	-34	+10	+15
Shirley Analyzer:															
Visible waste.....pct	-35	-58	-33	-09	-57	-20	-16	+19	+90	+90	+36	+14	-39	+70	-14
Total waste.....pct	-49	-53	-47	-11	-68	-22	-29	+25			+35	-12	-39	+74	-26
Color of raw stock:															
Grayness.....No.	-18	-68	-08	-28	-49	-20	+06	+22	+36	+35		+34	-91	+36	+13
Yellowness.....No.	+15	-22	+21	-13	-06	+02	+20	+20	+14	-12	+34	-91	-36	+02	+13
Composite.....index	+13	+71	+08	+22	+47	+26	-09	-34	-39	-39				-36	-14
Picker & card waste.....pct	-73	-52	-69	-07	-65	-10	-44	+10	+70	+74	+36	+02	-36	-56	-56
Spinning Potential.....No.	+82	-10	+86	-27	+20	-13	+61	+15	-14	-26	+13	+13	-14		
Yarn skein strength:															
8s (74 tex).....pounds	+71	+15	+74	-07	+38	+19	+71	-04	-13	-26	-10	+23	+10	-50	+70
22s (27 tex).....pounds	+70	-08	+73	-17	+24	+10	+63	+03	-01	-13	+02	+26	-04	-37	+79
Yarn elongation:															
8s (74 tex).....pct	+35	-49	+42	-35	-27	-52	+14	+54	+19	+15	+34	+31	-36	-08	+62
22s (27 tex).....pct	+26	-47	+35	-29	-31	-47	+11	+57	+23	+22	+31	+30	-36	+04	+56
Yarn appearance:															
8s (74 tex).....index	+43	+25	+39	+09	+50	-02	+27	-11	-59	-57	-15	-03	+12	-50	+29
22s (27 tex).....index	+47	+44	+43	+25	+68	+20	+35	-30	-68	-68	-26	-06	+28	-61	+30
Yarn imperfections:															
8s (74 tex).....No.	-46	-42	-43	-22	-69	-21	-32	+29	+77	+77	+29	+13	-31	+64	-48
22s (27 tex).....No.	-47	-37	-44	-14	-63	-16	-30	+17	+77	+76	+25	+12	-26	+65	-31
Color - 22s gray yarn:															
Reflectance.....Rd	-02	+55	-09	+32	+52	+32	-02	-46	-41	-41	-60	-51	+67	-18	-30
Yellowness.....Yb	+11	-26	+19	-26	-02	+04	+17	-06	+23	+11	+26	+56	-18	+08	+02
Composite.....index	+02	+47	-03	+25	+52	+33	+04	-48	-36	-38	-52	-36	+61	-16	-27
Color-22s bleached yarn:															
Reflectance.....Rd	+14	+46	+16	+02	+34	+27	+16	-14	-24	-27	-45	+02	+48	-20	+02
Yellowness.....Yb	-47	-29	-46	-01	-46	+13	-16	-01	+15	+24	+32	-28	-29	+47	-21
Composite.....index	+27	+50	+27	+05	+44	+20	+19	-11	-25	-31	-51	+10	+53	-32	+08
Color - 22s dyed yarn:															
Reflectance.....Rd	-38	+04	-37	+16	-07	+44	-10	-42	-07	-02	+08	-24	+06	+24	-33
Blueness.....b	+55	+42	+51	+43	+73	+23	+38	-23	-27	-38	-41	+10	+36	-56	+28
Composite.....index	+60	+30	+56	+27	+59	-01	+35	.00	-17	-27	-35	+18	+25	-53	+36

Table 9.--Continued

Item	Yarn strength			Yarn elongation			Yarn appearance			Yarn imprfctns			Color - 22s gray yarn			Color-22s bleached yarn			Color - 22s dyed yarn		
	Coarse 8s	Fine 22s	Lbs.	Coarse 8s	Fine 22s	Pct.	Coarse 8s	Fine 22s	Index	Coarse 8s	Fine 22s	No.	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
Sample Distribution:																					
Mean.....	307.7	97.7	7.7	7.4	6.3	.6	122.5	105.7		40.1	19.8	66.8	11.8	91.8	84.3	3.4	101.9	26.7	25.8	103.8	
Standard deviation(±)....	19.2	7.3	.6	8.1	13.7		8.1	13.7		26.1	14.0	2.5	.5	5.3	2.0	.4	5.0	1.0	.9	4.8	
Correlation Coef. for:																					
Classification:																					
Grade.....	71	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Staple.....	32d	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches
Fiber length:																					
2.5% span.....	74	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73
50/2.5.....	07	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Micronaire.....																					
.....	38	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Fiber strength:																					
Zero gage.....	19	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
1/8" gage.....	71	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
Elongation (1/8").....	04	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03	03
Shirley Analyzer:																					
Visible waste.....	13	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01	01
Total waste.....	26	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Color of raw stock:																					
Grayness.....	10	02	02	02	02	02	02	02	02	02	02	02	02	02	02	02	02	02	02	02	02
Yellowness.....	23	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
Composite.....	10	04	04	04	04	04	04	04	04	04	04	04	04	04	04	04	04	04	04	04	04
Picker & card waste.....																					
.....	50	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
Spinning Potential.....																					
.....	70	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
Yarn skein strength:																					
8s (74 tex).....	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
22s (27 tex).....	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
Yarn elongation:																					
8s (74 tex).....	27	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
22s (27 tex).....	27	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Yarn appearance:																					
8s (74 tex).....	19	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07	07
22s (27 tex).....	30	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Yarn imperfections:																					
8s (74 tex).....	25	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
22s (27 tex).....	24	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Color - 22s gray yarn:																					
Reflectance.....	00	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Yellowness.....	21	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Composite.....																					
.....	07	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Color-22s bleached yarn:																					
Reflectance.....	45	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Yellowness.....	26	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Composite.....																					
.....	49	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Color - 22s dyed Yarn:																					
Reflectance.....	26	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Blueness.....	42	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Composite.....																					
.....	44	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37

Table 10.--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on 263 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1975

Item	Grade	Staple	Fiber length		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Spinning Potential		
			2.5% span	In.		Pct.	Rdg.		Mpsi	G/tex	Pct.	Total waste	Gray- ness			Yellow- ness	Com- posite
Sample Distribution:																	
Mean.....	92.9	34.6	1.09	+32	+21	+16	+29	+42	+02	-80	-79	-13	+76	-60	+32		
Standard deviation (±).....	5.2	.9	.04	+80	+49	+34	+37	+51	-07	-41	-46	-33	+37	-41	+60		
Correlation Coef. for																	
Classification:																	
Grade.....index																	
Staple.....32d inches	.41																
Fiber length:																	
2.5% span.....inches	+32	+80			+42	+35	+32	+49	-07	-30	-34	-33	+34	-33	+62		
50/2.5.....pct	+21	+49			+64	+64	+21	+27	-14	-23	-34	+01	+07	-45	+34		
Micronaire.....reading	+16	+34					-02	-08	-09	-15	-28	+02	-05	-44	-13		
Fiber strength:																	
Zero gage.....Mpsi	+29	+37			+21	-02	+75	+75	-66	-28	-27	-39	+38	-04	+44		
1/8" gage.....grams/tex	+42	+51			+27	-08	+75	-29	-40	-38	-38	-53	+52	-17	+70		
Elongation (1/8").....pct	+02	-07			-14	-09	-66	-29	-04	-02	-02	-06	+01	-12	+01		
Shirley Analyzer:																	
Visible waste.....pct	-80	-41			-23	-15	-28	-40	-04	+97	+97	+17	-58	+64	-41		
Total waste.....pct	-79	-46			-34	-28	-27	-38	-02			+17	-56	+72	-41		
Color of raw stock:																	
Grayness.....No.	-75	-40			-07	+04	-39	-53	.00	+56	+55	+27	-94	+37	-41		
Yellowness.....No.	-13	-33			+01	+02	-14	-24	-06	+17	+55	-94	-18	+07	-33		
Composite.....index	+76	+37			+07	-05	+38	+52	+01	-58	-56	-18	-18	-40	+39		
Picker & card waste.....pct	-60	-41			-45	-44	-04	-17	-12	+64	+72	+07	-40		-30		
Spinning Potential.....No.	+32	+60			+34	-13	+44	+70	+01	-41	-41	-33	+39	-30			
Yarn skein strength:																	
22s (27 tex).....pounds	+43	+54			+27	-19	+63	+85	+13	-45	-43	-30	+53	-24	+90		
50s (12 tex).....pounds	+39	+59			+29	-17	+59	+83	-10	-43	-41	-31	+52	-23	+91		
Yarn elongation:																	
22s (27 tex).....pct	+15	+11			-18	-34	-23	+12	+57	-20	-17	-27	+21	-14	+43		
50s (12 tex).....pct	+28	+31			-01	-31	.00	+39	+43	-37	-32	-27	+39	-22	+68		
Yarn Appearance:																	
22s (27 tex).....index	+08	+23			+49	+55	-12	-16	+12	-19	-27	-11	-17	-35	+02		
50s (12 tex).....index	+03	+15			+39	+40	-14	-15	+20	-15	-20	-11	-16	-28	+04		
Yarn imperfections:																	
22s (27 tex).....No.	-31	-31			-48	-48	-02	-03	-06	+39	+47	+12	-07	+50	-19		
50s (12 tex).....No.	-30	-38			-54	-53	-06	-08	-05	+38	+47	+15	-06	+51	-23		
Color - 22s gray yarn:																	
Reflectance.....Rd	+67	+39			+12	+04	+37	+51	-01	-52	-50	-32	+85	-35	+35		
Yellowness.....b	+03	+23			-07	-19	+08	+11	-07	+10	+11	+56	+14	+04	.00		
Composite.....index	+65	+30			+09	-03	+39	+51	-04	-47	-44	-13	+85	-33	+33		
Color-22s bleached yarn:																	
Reflectance.....Rd	.00	-01			+03	+08	-20	-06	+02	+01	-02	+01	-02	-18	-03		
Yellowness.....b	-28	-32			-30	-38	+02	-08	-13	+22	+29	+18	-30	+37	-16		
Composite.....index	+07	+05			+08	+15	-18	-04	+23	-04	-08	-03	+06	-25	+01		
Color - 22s dyed yarn:																	
Reflectance.....Rd	-17	-24			-26	-29	+03	-01	-16	+11	+15	-15	-27	+28	-15		
Blueness.....b	+19	+24			+42	+56	-12	-15	+11	-16	-23	+11	+21	-44	-06		
Composite.....index	+21	+28			+42	+52	-11	-10	+15	-17	-24	+14	+27	-44	+02		

Table 10.--Continued

Item	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprctns		Color - 22s gray yarn		Color-22s bleached yarn		Color - 22s dyed yarn	
	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd.	+b	Index	Rd	-b	Index
Sample Distribution:														
Mean.....index	108.1	36.1	5.9	4.4	75.5	75.5	23.5	18.3	68.9	10.7	92.6	85.2	27.1	25.9
Standard deviation (+)....	12.7	6.6	.5	.5	10.1	10.1	9.8	7.8	2.6	.5	5.3	2.2	.9	103.3
Correlation Coef. for:														4.4
Classification:														
Grade.....index	+43	+39	+15	+28	+08	+03	-31	-30	+67	+03	+65	.00	-17	+19
Staple.....32d inches	+54	+59	+11	+31	+23	+15	-31	-38	+39	-23	+30	-01	-24	+28
Fiber length:														
2.5% span.....inches	+53	+58	+13	+31	+14	+09	-25	-31	+36	-17	+27	+10	-27	+27
50/2.5.....pct	+27	+29	-18	-01	+49	+39	-48	-54	+12	-07	+09	+03	-26	+42
Micronaire.....reading	-19	-17	-34	-31	+55	+40	-48	-53	+04	-19	-03	+08	-29	+56
Fiber strength:														
Zero gage.....Mpsi	+63	+59	-23	.00	-12	-14	-02	-06	+37	+08	+39	-20	+03	-12
1/8" gage.....grams/tex	+85	+83	+12	+39	-16	-15	-03	-08	+51	+11	+51	-06	-01	-15
Elongation (1/8").....pct	+13	-10	+57	+43	+12	+20	-06	-05	-01	-07	-04	+02	-16	+15
Shirley Analyzer:														
Visible waste.....pct	-45	-43	-20	-37	-19	-15	+39	+38	-52	+10	-47	+01	+11	-17
Total waste.....pct	-43	-41	-17	-32	-27	-20	+47	+47	-50	+11	-44	-02	+15	-24
Color of raw stock:														
Grayness.....No.	-55	-54	-21	-39	+16	+13	+08	+07	-82	-09	-81	+03	+24	-23
Yellowness.....No.	-30	-31	-27	-27	-11	-11	+12	+15	-32	+56	-13	+01	-15	+14
Composite.....index	+53	+52	+21	+39	-17	-16	-07	-06	+85	+14	+85	-02	-27	+27
Picker & card waste...pct	-24	-23	-14	-22	-35	-28	+50	+51	-35	+04	-33	-18	+28	-44
Spinning Potential.....No.	+90	+91	+43	+68	+02	+04	-19	-23	+35	.00	+33	-03	-15	+02
Yarn skein strength:														
22s (27 tex).....pounds	+95	+95	+40	+63	-07	.00	-13	-17	+49	+06	+49	-06	-09	-06
50s (12 tex).....pounds			+36	+66	-10	-03	-08	-13	+48	+07	+48	-07	-14	.00
Yarn elongation:														
22s (27 tex).....pct	+40	+36	+67	+67	-01	+17	-06	-04	+18	-08	+14	+09	-02	-05
50s (12 tex).....pct	+63	+66			-02	+09	-07	-07	+37	-01	+34	.00	-10	+03
Yarn Appearance:														
22s (27 tex).....index	-07	-10	-01	-02	+71	+71	-72	-73	-05	-25	-12	-02	-11	+35
50s (12 tex).....index	.00	-03	+17	+09	-72	-61	-62	-61	-01	-21	-07	+04	-14	+25
Yarn imperfections:														
22s (27 tex).....No.	-13	-08	-06	-07	-72	-62	.96	.96	-16	+16	-10	+03	-31	+30
50s (12 tex).....No.	-17	-13	-04	-07	-73	-61			-16	+19	-09	+01	-32	+24
Color - 22s gray yarn:														
Reflectance.....Rd	+49	+48	+18	+37	-05	-01	-16	-16	+01	+01	+93	+06	+24	+25
Yellowness.....+b	+06	+07	-08	-01	-25	-21	+16	+19	+01	+31	+31	+07	.00	+03
Composite.....index	+49	+48	+14	+34	-12	-07	-10	-09	+93	+31	+06	+06	+21	+25
Color-22s bleached yarn:														
Reflectance.....Rd	-06	-07	+09	.00	-02	+04	+03	+01	+06	+07	+06	+96	+24	+11
Yellowness.....+b	-12	-14	-04	-13	-19	-15	+25	+29	-33	+26	-23	-26	+54	-52
Composite.....index	-03	-04	+09	+03	+03	+08	-02	-06	+11	+01	+11	+96	+10	+22
Color - 22s dyed yarn:														
Reflectance.....Rd	-09	-14	-02	-10	-11	-14	+20	+22	-21	-12	-25	-24	-49	-78
Blueness.....+b	-13	-09	-07	-01	+35	+25	-31	-32	+24	.00	+21	+05	-49	+93
Composite.....index	-06	.00	-05	+03	+30	+24	-31	-32	+25	+03	+25	+11	+78	

Table 11.--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on 41 long staple samples, collected at triweekly intervals from selected gin points, crop of 1975

Item	Grade	Staple	Fiber length		Micro- naire	Fiber strength		Elon- gation 1/8"	Shirley Analyzer			Color of raw stock			Picker & card waste	Spinning Potential
			2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Visible waste	Pct.	Total waste	Gray- ness	Yellow- ness	Com- posite		
Sample Distribution:	Index	32d in.				Mpsi	G/tex	Pct.				No.	No.	Index	Pct.	No.
Mean.....	91.6	35.4	1.12	43.5	3.8	88.7	24.1	6.08	2.57	3.49	2.0	2.7	97.5	97.5	9.1	69.5
Standard deviation (+).....	6.6	1.4	.04	1.5	.5	4.8	2.2	.51	.97	1.08	1.5	.6	6.2	6.2	1.3	17.6
Correlation Coef. for:																
Classification:																
Grade.....index																
Staple.....32d inches	+65	+65	+63	+52	-57	+71	+66	-21	-60	-60	-84	-40	-89	-89	-54	+76
Fiber length:			+88	+54	-57	+70	+70	-49	-14	-15	-68	-47	+69	+69	-26	+83
2.5% span.....inches	+63	+88														
50/2.5.....pct	+52	+54	+63	+63	-56	+55	+56	-26	-18	-18	-71	-42	+66	+66	-36	+85
Micronaire.....reading	-57	-57	-56	-09	-09	-53	-56	+09	+12	+07	+78	+43	-75	-75	+15	-81
Fiber strength:																
Zero gage.....Mpsi	+71	+70	+71	+55	-53	+70	+76	-40	-46	-44	-72	-28	+71	+71	-44	+77
1/8" gage.....grams/tex	+66	+70	+77	+26	-56	+76	+76	-34	-35	-34	-72	-29	+70	+70	-46	+81
Elongation (1/8").....pct	-21	-49	-42	-26	-26	-40	-34		+20	+23	+10	+24	-08	-08	+22	-31
Shirley Analyzer:																
Total waste.....pct	-60	-14	-18	-28	+12	-46	-35	+20	+99	+99	+37	+10	-40	-40	+73	-25
Color of raw stock:																
Grayness.....No.	-84	-68	-71	-42	+78	-72	-72	+10	+37	+35	+54	+54	-97	-97	+41	-89
Yellowness.....No.	-40	-47	-42	-07	+43	-28	-29	+24	+10	-15	-97	-51	-51	-51	+15	-45
Composite.....index	+89	+69	+66	+42	-75	+71	+70	-08	-40	-39	-97	-51	-51	-51	-43	+87
Picker & card waste.....pct	-54	-26	-36	-36	+15	-44	-46	+22	+73	+77	+41	+15	+15	+15	-34	
Spinning Potential.....No.	+76	+83	+85	+55	-81	+77	+81	-31	-25	-22	-89	-45	-45	+87	-34	
Yarn skein strength:																
22s (27 tex).....pounds	+77	+85	+88	+60	-75	+82	+81	-32	-30	-28	-89	-45	-45	+87	-39	+98
50s (12 tex).....pounds	+76	+85	+88	+59	-76	+84	+84	-31	-28	-25	-89	-45	-45	+87	-37	+98
Yarn elongation:																
22s (27 tex).....pct	+70	+73	+79	+50	-78	+68	+77	-15	-20	-18	-87	-48	-48	+84	-33	+91
50s (12 tex).....pct	+70	+76	+78	+50	-78	+70	+81	-17	-18	-16	-89	-45	-45	+87	-33	+92
Yarn appearance:																
22s (27 tex).....index	-35	-57	-59	-11	+83	-47	-58	+11	-14	-21	+62	+33	+33	-56	-14	-73
50s (12 tex).....index	-32	+51	-55	-04	+75	-44	-57	+22	-02	-10	+54	+26	+26	-47	-07	-63
Yarn imperfections:																
22s (27 tex).....No.	+17	+46	+54	+21	-65	+31	+52	-03	+30	-38	-43	-13	-13	+37	+25	+61
50s (12 tex).....No.	+22	+51	+55	+21	-68	+36	+55	-09	+30	-36	-48	-20	-20	+43	+27	+66
Color - 22s gray yarn:																
Reflectance.....Rd	+67	+47	+46	+27	-56	+53	+55	.00	-41	-42	-75	-51	-51	+77	-40	+62
Yellowness.....Yb	+21	+03	+16	+37	.00	+25	+30	+24	-09	-07	-14	+46	+46	+20	-20	+17
Composite.....index	+71	+48	+50	+37	-54	+59	+61	+04	-42	-42	-78	-38	-38	+80	-44	+66
Color - 22s bleached yarn:																
Reflectance.....Rd	+01	-13	-06	+08	+21	-01	+07	+49	-10	-11	+05	+07	+07	+01	-11	-21
Yellowness.....Yb	-03	.00	-06	+03	-02	+15	+19	-08	+12	+15	+10	+39	+39	+13	+13	+01
Composite.....index	+01	-14	-06	-10	+22	-04	-11	+49	-12	-14	+04	+01	+01	+02	-14	-22
Color - 22s dyed yarn:																
Reflectance.....Rd	-50	-42	-52	-32	+49	-46	-44	-16	+15	+13	+67	+27	+27	-67	+24	-63
Blueness.....B	+39	+21	+24	+26	-03	+19	+19	-04	-30	-30	-35	-05	-05	+37	-43	+24
Composite.....index	+52	+38	+46	+35	-31	+39	+38	+11	-26	-25	-60	-19	-19	+61	-38	+52

Table 11.--Continued

Item	Yarn strength			Yarn elongation			Yarn appearance			Yarn impurities			Color - 22s gray yarn			Color-22s bleached yarn			Color - 22s dyed yarn		
	Coarse 22s	Fine 50s	Lbs.	Coarse 22s	Fine 50s	Pct.	Coarse 22s	Fine 50s	Index	Coarse 22s	Fine 50s	No.	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Yellow- ness	Com- posite	Reflect- ance	Blue- ness	Com- posite
	Lbs.	Lbs.	Lbs.	Pct.	Pct.	Pct.	Index	Index	Index	No.	No.	No.	Rd.	+b	Index	Rd.	+b	Index	Rd.	-b	Index
Sample Distribution:																					
Mean.....	112.6	38.7		5.5	4.3		98.5	75.1		27.5	21.5		68.4	10.7	91.5	85.7	3.2	106.2	27.2	25.6	102.0
Standard deviation(±)...	23.2	11.4		.6	.7		19.6	11.9		16.8	12.7		2.8	.5	5.7	2.7	.3	6.4	1.2	.5	3.9
Correlation Coef. for:																					
Classification:																					
Grade.....	+77	+76		+70	+70		-35	-32		+17	+22		+67	+21	+71	+01	-03	+01	-50	+39	+52
Staple.....	+85	+85		+73	+76		-57	-51		+46	+51		+47	+03	+48	-13	.00	-14	-42	+21	+38
Fiber length:																					
2.5% span.....	+88	+88		+79	+78		-59	-55		+54	+55		+46	+16	+50	-06	-06	-06	-52	+24	+46
50/2.5.....	+60	+59		+50	+50		-11	-04		+21	+21		+27	+37	+37	-08	+03	-10	-32	+26	+35
Micronaire.....	-75	-76		-78	-78		+83	+75		-65	-68		-56	.00	-54	+21	-02	+22	+49	-03	-31
Fiber strength:																					
Zero gage.....	+82	+84		+68	+70		-47	-44		+31	+36		+53	+25	+59	-01	+15	-04	-46	+19	+39
1/8" gage.....	+81	+84		+77	+81		-58	-57		+52	+55		+55	+30	+61	+07	+19	-11	-44	+19	+38
Elongation (1/8").....	-32	-31		-15	-17		+11	+22		-03	-09		.00	+24	+04	+49	-08	+49	-16	-04	+11
Shirley Analyzer:																					
Visible waste.....	-30	-28		-20	-18		-14	-02		+30	+30		-41	-09	-42	-10	+12	-12	+15	-30	-26
Total waste.....	-28	-25		-18	-16		-21	-10		-38	-36		-42	-07	-42	-11	+15	-14	+13	-30	-25
Color of raw stock:																					
Grayness.....	-89	-89		-87	-89		+62	+54		-43	-48		-75	-14	-78	+05	+10	+04	+67	-35	-60
Yellowness.....	-45	-45		-48	-45		+33	+26		-13	-20		-51	+46	-38	+07	+39	+01	+27	-05	-19
Composite.....	+87	+87		+84	+87		-56	-47		+37	+43		+77	+20	+80	+01	-10	+02	-67	+37	+61
Picker & card waste.....	-39	-37		-33	-33		-14	-07		+25	+27		-40	-20	-44	-11	+13	-14	+24	-43	-38
Spinning Potential.....	+98	+98		+91	+92		-73	-63		+61	+66		+62	+17	+66	-21	+01	-22	-63	+24	+52
Yarn skein strength:																					
22s (27 tex).....	+99	+99		+93	+92		-66	-57		+55	+60		+64	+20	+69	-17	-03	-17	-66	+32	+58
50s (12 tex).....	+99	+99		+91	+93		-69	-60		+58	+62		+62	+21	+67	-16	-01	-16	-64	+28	+55
Yarn elongation:																					
22s (27 tex).....	+93	+91		+93	+93		-66	-55		+60	+64		+65	+15	+67	-12	-02	-13	-67	+36	+60
50s (12 tex).....	+92	+93		+93	+93		-71	-57		+57	+62		+64	+25	+69	-13	+01	-13	-62	+24	+51
Yarn appearance:																					
22s (27 tex).....	-66	-69		-66	-71		+86	+86		-85	-87		-32	+01	-31	+18	-20	+22	+38	+19	-13
50s (12 tex).....	-57	-60		-55	-57		+86	-74		-74	-76		-27	.00	-25	+15	-27	+20	+27	+16	-09
Yarn imperfections:																					
22s (27 tex).....	+55	+58		+60	+57		-85	-74		+97	+97		+12	+06	+13	-20	+14	-23	-37	-14	+16
50s (12 tex).....	+60	+62		+64	+62		-87	-76		+97	+97		+20	+02	+21	-24	+16	-27	-37	-13	+17
Color - 22s gray yarn:																					
Reflectance.....	+64	+62		+65	+64		-32	-27		+12	+20		+02	+02	+96	+10	-15	+12	-56	+43	+56
Yellowness.....	+20	+21		+15	+25		+01	.00		+06	+02		+02	+27	+27	+27	+22	+23	-33	+14	+30
Composite.....	+69	+67		+67	+69		-31	-25		+13	+21		+96	+27		+15	-11	+16	-63	+46	+63
Color-22s bleached yarn:																					
Reflectance.....	-17	-16		-12	-13		+18	+15		-20	-24		+10	+27	+15	+04	-04	+98	-19	+09	+14
Yellowness.....	-03	-01		-02	-01		-20	-27		+14	+16		-15	+22	-11	-04	-21	-21	+36	-23	-36
Composite.....	-17	-16		-13	-13		+22	+20		-23	-27		+12	+23	+16	+98	-21	-21	-24	+13	+20
Color - 22s dyed yarn:																					
Reflectance.....	-66	-64		-67	-62		+38	+27		-37	-37		-56	-33	-63	-19	+36	-24	-48	-48	-88
Blue-ness.....	+32	+28		+36	+24		+19	+16		-14	-13		+43	+14	+46	+09	-23	+13	-88	+84	+84
Composite.....	+58	+55		+60	+51		-13	-09		+16	+17		+56	+30	+63	+14	-36	+20	-88	+84	+84

Table 11a--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on combed yarns from 41 long staple samples from selected gin points, crop of 1975

Statistical Items	Picker & Card Waste	Comber waste	Combed Yarn Values									
			Yarn strength		Yarn elongation		Yarn appearance		Yarn imperfections			
			22s	50s	22s	50s	22s	50s	22s	50s	22s	50s
			Pct.	Lbs.	Pct.	Lbs.	Pct.	Index	Pct.	Index	No.	No.
Sample Distribution:												
Mean.....	9.15	17.60	134.6	49.9	6.1	4.9	109.3	88.5	14.9	11.3		
Standard deviation (+)....	1.33	1.83	20.9	10.5	.5	.5	16.6	14.6	10.9	8.8		
Correlation Coeff. for												
Classification:												
Grade.....index	-.54	-.66	+76	+75	+41	+64	-.32	-.34	+18	+18		
Staple.....32d inches	-.26	-.74	+83	+78	+47	+64	-.46	-.39	+35	+37		
Fiber length:												
2.5% span.....inches	-.36	-.74	+87	+82	+57	+68	-.53	-.47	+42	+43		
50/2.5 unif.....pct	-.36	-.77	+57	+56	+23	+42	.00	-.03	+04	+06		
Micronaire.....reading	+1.14	+35	-.76	-.77	-.68	-.80	+80	+78	-.69	-.69		
Fiber strength:												
Zero gage.....Mpsi	-.44	-.65	+83	+85	+45	+64	-.33	-.40	+22	+20		
1/8" gage.....grams/tex	-.46	-.65	+83	+82	+53	+73	-.53	-.53	+47	+46		
Elongation (1/8").....pct	+2.22	+29	-.33	-.30	-.12	-.14	+09	+06	+02	+01		
Shirley Analyzer:												
Visible waste.....pct	+7.73	+40	-.30	-.32	-.14	-.19	-.09	.00	+18	+23		
Total waste.....pct	+7.77	+42	-.28	-.30	-.11	-.16	-.15	-.08	+25	+31		
Color of raw stock:												
Grayness.....No.	+4.1	+61	-.88	-.87	-.62	-.83	+55	+52	-.44	-.44		
Yellowness.....No.	+1.15	+20	-.42	-.47	-.27	-.49	+41	+34	-.28	-.27		
Composite.....index	-.43	-.63	+85	+84	+55	+80	-.48	-.46	+37	+37		
Picker & card waste....pct		+48	-.37	-.35	-.29	-.32	-.03	-.07	+15	+21		
Comber waste.....pct	+4.8		-.76	-.71	-.48	-.65	+19	+22	-.09	-.11		
Combed yarn strength:												
22s (27 tex).....pounds	-.37	-.76										
50s (12 tex).....pounds	-.35	-.71	+97	+97	+68	+86	-.59	-.58	+46	+48		
Combed yarn elongation:												
22s (27 tex).....pct	-.29	-.48	+68	+64	+79	+79	-.53	-.51	+35	+39		
50s (12 tex).....pct	-.32	-.65	+86	+88			-.59	-.61	+47	+50		
Combed yarn appearance:												
22s (27 tex).....index	-.03	+19	-.59	-.58	-.53	-.59	+88	+88	-.86	-.86		
50s (12 tex).....index	-.07	+22	-.58	-.59	-.51	-.61			-.77	-.77		
Combed yarn imperfections:												
22s (27 tex).....No.	+1.15	-.09	+46	+46	+35	+47	-.86	-.77	+98	+98		
50s (12 tex).....No.	+2.1	-.11	+48	+48	+39	+50	-.86	-.77				

Table 12.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 65 short staple samples, collected at triweekly intervals from selected gin points, crop of 1975

Statistical Items	Dependent Variables											
	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
	Coarse OS	Fine 22s	Coarse OS	Fine 22s	Coarse OS	Fine 22s	Coarse OS	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable.....	6.6	308	7.4	6.3	122	106	40	20	43	92	102	104
Grade index.....	91	91	91	91	91	91	91	91	30.8	91	91	91
Staple length.....	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8
Micronaire.....	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Fiber strength (0 gage)....	85	85	85	85	85	85	85	85	85	85	85	85
Uniformity ratio.....	45	45	45	45	45	45	45	45	45	45	45	45
Standard Deviations (±) for:												
Dependent variable.....	1.15	19.2	.61	.56	8.1	13.7	26.1	14.0	7.5	5.3	5.0	4.8
Grade index.....	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Staple length.....	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Micronaire.....	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59
Fiber strength (0 gage)....	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Uniformity ratio.....	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Simple Correlation Coef. for:												
Grade index.....	-.52	.15	-.49	-.47	.25	.44	-.42	-.37	-.10	.47	.50	.30
Staple length.....	-.73	.71	.35	.26	.43	.47	-.46	-.47	.82	.02	.27	.60
Micronaire.....	-.65	.38	-.27	-.31	.68	.68	-.69	-.63	.20	.52	.44	.59
Fiber strength (0 gage)....	-.10	.19	-.52	-.47	-.02	-.20	-.21	-.16	-.13	.33	.20	-.01
Uniformity ratio.....	-.07	-.07	-.35	-.29	.09	.25	-.22	-.14	-.27	.25	.04	.27
Multiple Cor. Data for:												
DEPENDENT VARIABLE with												
GRADE INDEX, STAPLE LENGTH												
Multiple Cor. Coef. ....	.84	.71	.66	.58	.46	.60	.58	.55	.85	.47	.53	.63
Partial Cor. Coef. for:												
Grade index.....	-.59	.04	-.59	-.54	.20	.42	-.39	-.33	-.41	.47	.48	.26
Staple length.....	-.77	.71	.50	.39	.40	.45	-.44	-.45	.85	-.07	.22	.58
Beta Coefficients for:												
Grade index.....	-.41	.03*	-.56	-.52	.18*	.37	-.35	-.30	-.24	.48	.47	.21*
Staple length.....	-.67	.71	.44	.35	.40	.41	-.40	-.42	.86	-.06	.19*	.56
Regression Equation:												
Constant (a).....	+31.72	+7.98	+8.19	-7.65	+26.60	-109.54	+434.55	+222.54	-60.76	+50.57	+37.40	+27.43
Regression Coef. for:												
Grade index.....	-.10	.12	-.07	-.06	.31	.105	-.187	-.85	-.37	.52	.49	.21
Staple length.....	-.53	+9.40	.19	.13	+2.21	+3.90	-7.29	-4.06	+4.48	-.21	.66	+1.87
Standard error (±).....	.64	13.41	.46	.46	7.19	10.96	21.33	11.63	3.93	4.67	4.25	3.74
DEPENDENT VARIABLE with												
GRADE INDEX, STAPLE LENGTH,												
MICRONAIRE												
Multiple Cor. Coef. ....	.84	.72	.72	.66	.53	.69	.70	.64	.88	.63	.54	.67
Partial Cor. Coef. for:												
Grade index.....	-.47	.08	-.37	-.30	.00	.12	-.06	-.05	-.13	.18	.35	.03
Staple length.....	-.68	.65	.60	.52	.20	.17	-.13	-.19	.87	-.35	.11	.39
Micronaire.....	-.11	-.07	-.38	-.38	.28	.44	-.49	-.39	-.42	.47	.11	.30
Beta Coefficients for:												
Grade index.....	-.36	.07*	-.35	-.30*	.00*	.11*	-.05*	-.05*	-.08*	.17*	.40*	.03*
Staple length.....	-.62	.75	.65	.57	.21*	.16*	-.11*	-.18*	.102	-.36*	.12*	.39
Micronaire.....	-.09*	-.08*	-.43	-.46	.38*	.53	-.60	-.50	-.33	.62	.14*	.35*
Regression Equation:												
Constant (a).....	+30.35	-11.97	+4.62	+4.17	+67.82	-11.95	+224.25	+129.59	-94.44	+94.69	+47.04	+50.39
Regression Coef. for:												
Grade index.....	-.09	.27	-.04	-.03	-.01	.31	-.28	-.15	-.12	.19	.41	.03
Staple length.....	-.50	+9.90	.27	.22	.19	.47	-2.04	-1.74	.532	-1.31	.42	+1.30
Micronaire.....	-.17	-2.52	-.45	-.44	+5.21	+12.35	-26.61	-11.76	+5.98	+5.98	+1.22	+2.91
Standard Error (±).....	.03	13.37	.43	.42	6.90	9.85	18.62	10.69	3.56	4.12	4.23	3.57

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index	
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (O GAGE)	.84	.75	.78	.76	.69	.55	.70	.64	.88	.63	.54	.69	
	Multiple Cor. Coef.....												
	Partial Coef. for:												
	.49	.09	.34	.27	.20	.09	.12	.06	.14	.13	.33	.13	
	.66	.69	.73	.58	.49	.16	.16	.18	.86	.33	.11	.36	
	.14	.13	.19	.35	.35	.31	.44	.39	.43	.46	.12	.33	
	.17	.32	.37	.35	.27	.18	.02	.02	.07	.08	.03	.19	
	Beta Coefficients for:												
	.43	.09*	.33*	.24*	.20*	.11*	.12*	.06*	.09*	.14*	.42*	.14*	
	.60	.80	.85	.59	.41*	.53	.15*	.18*	.13*	.35*	.11*	.36*	
	.11*	.13*	.18*	.37	.41*	.42*	.53	.60	.34	.60	.15*	.39	
	.11*	.26*	.29	.28	.23*	.18*	.02*	.00*	.04*	.07*	.03*	.17*	
	Regression Equation:												
	.28.98	.63.65	.21.50	.7.14	.6.01	.82.32	.9.19	.223.40	.126.51	.97.50	.89.88	.48.88	.58.44
Regression Coef. for:													
.10	.36	.49	.03	.02	.18	.33	.28	.18	.15	.15	.43	.14	
.48	.10.59	.4.30	.25	.20	.99	.1.44	.2.03	.1.71	.36	.26	.39	.1.19	
.22	.4.32	.2.29	.39	.39	.73	.12.43	.26.63	.11.86	.4.36	.45	.28	.3.19	
.03	.1.11	.4.7	.04	.03	.32	.05	.02	.06	.06	.08	.04	.18	
.62	.12.65	.4.61	.40	.41	.6.78	.9.84	.18.62	.10.69	.3.56	.4.11	.22	.3.50	
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (O GAGE), UNIFORMITY RATIO	.84	.75	.78	.76	.69	.55	.70	.65	.88	.65	.56	.71	
	Multiple Cor. Coef.....												
	Partial Cor. Coef. for:												
	.49	.08	.33	.27	.18	.07	.12	.04	.14	.10	.31	.17	
	.61	.65	.68	.52	.47	.10	.15	.06	.83	.37	.01	.43	
	.10	.14	.15	.27	.32	.30	.36	.39	.35	.46	.19	.13	
	.17	.32	.37	.35	.27	.18	.02	.00	.07	.08	.03	.20	
	.02	.06	.00	.03	.07	.09	.01	.12	.00	.17	.16	.26	
	Beta Coefficients for:												
	.43	.08*	.33*	.25*	.19*	.09*	.12*	.04*	.04*	.11*	.38	.18*	
	.61	.83	.85	.58	.56	.12*	.16*	.06*	.11*	.44	.01*	.49	
	.10*	.18*	.17*	.35*	.47	.50*	.53*	.68	.60	.76	.30*	.18*	
	.11*	.26*	.29	.28*	.23*	.18*	.02*	.00*	.02*	.07*	.03*	.17*	
	.01*	.05*	.00*	.03*	.07*	.10*	.01*	.09*	.12*	.00*	.17*	.24*	
Regression Equation:													
.29.65	.105.98	.22.12	.7.85	.4.26	.117.45	.15.51	.118.31	.49.37	.96.77	.131.66	.89.05	.5.64	
Regression Coef. for:													
.10	.32	.49	.03	.02	.15	.34	.19	.11	.15	.12	.40	.18	
.48	.10.95	.4.31	.24	.22	.68	.1.49	.1.13	.1.04	.35	.82	.05	.1.64	
.20	.5.72	.2.31	.37	.45	.89	.12.22	.30.09	.14.40	.4.33	.62	.20	.1.46	
.03	.1.11	.4.7	.04	.03	.32	.05	.02	.06	.06	.08	.04	.18	
.01	.73	.01	.01	.03	.61	.11	.182	.1.34	.01	.72	.70	.9.1	
.62	.12.63	.4.61	.40	.41	.6.75	.9.84	.18.53	.10.61	.3.56	.4.17	.17	.3.38	

*Statistically insignificant

Table 13.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 65 short staple samples, collected at triweekly intervals from selected gin points, crop of 1975

Statistical Items	Dependent Variables											
	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
	Coarse 8s	Fine 22s	Coarse 8s	Pct.	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable.....	6.6	308	98	7.4	6.3	106	40	20	43	92	102	104
Grayness.....	2	2	2	2	2	2	2	2	2	2	2	2
Yellowness.....	4	4	4	4	4	4	4	4	4	4	4	4
Nonlint content (S.A.).....	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
2.5% span length.....	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95
Micronaire.....	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Standard Deviation (\pm) for:												
Dependent variable.....	1.15	19.2	7.3	.61	.56	8.1	26.1	14.0	7.5	5.3	5.0	4.8
Grayness.....	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7
Yellowness.....	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
Nonlint content (S.A.).....	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
2.5% span length.....	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07
Micronaire.....	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59
Simple Correlation Coef. for:												
Grayness.....	+.36	-.10	+.02	+.34	+.31	-.26	+.29	+.25	+.13	-.52	-.51	-.35
Yellowness.....	+.02	+.23	+.26	+.31	+.30	-.06	+.13	+.12	+.13	-.36	+.10	+.18
Nonlint content (S.A.).....	+.74	-.26	-.13	+.15	+.22	-.68	+.77	+.76	-.26	-.38	-.31	-.27
2.5% span length.....	-.69	+.74	+.73	+.42	+.35	+.43	-.43	-.44	+.86	-.03	+.27	+.56
Micronaire.....	-.65	+.38	+.24	-.27	-.31	+.68	-.69	-.63	+.20	+.52	+.44	+.59
Multiple Cor. Data for:												
DEPENDENT VARIABLE with												
GRAYNESS, YELLOWNESS												
Multiple Cor. Coef. for:	.37	.29	.27	.40	.37	.26	.30	.25	.16	.55	.59	.47
Partial Cor. Coef. for:												
Grayness.....	+.37	-.19	-.08	+.26	+.23	-.25	+.27	+.23	+.09	-.45	-.58	-.45
Yellowness.....	-.12	+.28	+.27	+.22	+.22	+.03	+.03	+.04	+.09	-.22	+.34	+.34
Beta Coefficients for:												
Grayness.....	+.40	-.19*	-.08*	+.27*	+.23*	-.15*	+.29*	+.24*	+.10*	-.45	-.62	-.47
Yellowness.....	-.12*	+.29*	+.28	+.22*	+.22*	+.02*	+.03*	+.04*	+.10*	-.20*	+.31*	+.34*
Regression Equation:												
Constant (a).....	+.627	+.276-.37	+.83-.93	+.594	+.495	+.124.82	+.113.20	+.574	+.35.57	+.106.88	+.99.31	+.98.23
Regression Coef. for:												
Grayness.....	+.69	-.567	-.88	+.25	+.20	-.190	+.11.30	+.505	+.114	-.3.62	-.4.71	-.3.42
Yellowness.....	-.26	+.11.13	+.4.08	+.26	+.25	+.35	+.1.49	+.1.14	+.1.43	-.2.13	+.3.08	+.3.20
Standard Error (\pm).....	1.07	18.34	7.04	.56	.52	8.02	24.91	13.51	7.45	4.42	4.07	4.24
DEPENDENT VARIABLE with												
GRAYNESS, YELLOWNESS,												
NONLINT (S.A.)												
Multiple Cor. Coef. for:	.75	.38	.30	.40	.39	.68	.77	.76	.37	.59	.60	.50
Partial Cor. Coef. for:												
Grayness.....	+.20	-.10	-.02	+.24	+.18	-.03	+.02	-.05	+.21	-.38	-.53	-.39
Yellowness.....	-.16	+.29	+.27	+.22	+.22	+.04	+.04	+.06	+.10	-.23	+.34	+.34
Nonlint (S.A.).....	+.70	-.25	-.15	+.04	+.12	-.65	+.75	+.74	-.33	-.26	-.17	-.18
Beta Coefficients for:												
Grayness.....	+.15*	-.10*	-.03*	+.26*	+.19*	+.06*	+.01*	-.03*	+.22*	-.37	-.56	-.41
Yellowness.....	-.11*	+.29*	+.28*	+.22*	+.22*	+.02*	+.03*	+.04*	+.10*	-.20*	+.31*	+.34*
Nonlint (S.A.).....	+.70	-.26*	-.15*	+.03*	+.12*	-.61	+.76	+.77	-.35*	-.23*	-.15*	-.17*
Regression Equation:												
Constant (a).....	+.4.79	+.285.47	+.85-.99	+.590	+.4.82	+.133.99	-.24.35	-.14.04	+.40.51	+.109.13	+.100.66	+.99.72
Regression Coef. for:												
Grayness.....	+.26	-.3.02	-.28	+.24	+.16	-.55	+.57	-.71	+.2.57	-.2.97	-.4.31	-.2.99
Yellowness.....	-.26	+.11.12	+.4.08	+.26	+.25	+.82	+.1.53	+.1.16	+.2.13	-.2.13	+.3.08	+.3.20
Nonlint (S.A.).....	+.59	-.3.63	-.82	+.02	+.05	-.6.80	+.14.67	+.7.88	-.1.97	-.90	-.54	-.59
Standard Error (\pm).....	.76	17.75	6.96	.56	.52	10.03	16.55	9.09	7.02	4.27	4.01	4.18

*Statistically insignificant

Table 13.--Continued

Statistical Items	Dependent Variables											
	Yarn skin strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH												
Multiple Cor. Coef. ....	.85	.77	.63	.59	.60	.69	.78	.77	.90	.61	.61	.67
Partial Cor. Coef. for:												
Grayness.....	+0.07	+0.26	+0.44	+0.36	+0.10	-0.01	+0.01	-0.07	+0.62	-0.41	-0.51	-0.32
Yellowness.....	+0.12	+0.08	+0.07	+0.09	-0.02	-0.01	+0.08	+0.11	-0.33	-0.18	+0.30	+0.23
Nonlint (S.A.).....	+0.16	+0.33	+0.33	+0.36	-0.48	-0.56	+0.68	+0.67	+0.25	-0.31	-0.09	+0.10
2.5% span length.....	+0.70	+0.74	+0.54	+0.48	+0.15	+0.17	-0.15	-0.17	+0.89	-0.18	+0.13	+0.51
Beta Coefficients for:												
Grayness.....	+0.05*	+0.20*	+0.46	+0.38	+0.09*	-0.01*	.00*	-0.05*	+0.38	-0.41	-0.54	-0.20*
Yellowness.....	+0.01*	+0.06*	+0.06*	+0.08*	-0.02*	-0.01*	+0.06*	+0.08*	-0.17*	-0.16*	+0.28*	+0.20*
Nonlint (S.A.).....	+0.13*	+0.27*	+0.38	+0.33*	-0.54	-0.60	+0.71	+0.70	+0.14*	-0.32*	-0.08*	+0.10*
2.5% span length.....	+0.77	+0.84	+0.58	+0.52	+0.14*	+0.15*	-0.11*	-0.13*	+0.98	-0.17*	+0.12*	+0.53
Regression Equation:												
Constant (a).....	+0.19	-4.67	+0.55	+0.42	+0.06	+0.06	+0.63	+0.69	-0.66	+0.51	+0.55	+0.73
Regression Coef. for:												
Grayness.....	+0.148	+0.23	+0.43	+0.32	+0.15	-0.14	+0.15	-0.03	+0.48	-0.30	-0.10	-0.16
Yellowness.....	+0.32	+0.84	+0.08	+0.09	-0.27	-0.26	+0.04	+0.14	-0.48	-0.65	+0.75	+0.86
Nonlint (S.A.).....	+0.39	+1.44	+0.15	+0.16	-0.32	-0.04	+0.62	+0.19	+0.76	-0.23	-0.31	+0.34
2.5% span length.....	+0.25	+0.60	+0.44	+0.46	+0.67	+0.41	-0.50	-0.47	+0.12	-0.90	+0.50	+0.59
Standard Error (+).....	12.63	4.65	.47	.45	6.47	9.88	16.38	8.95	3.21	4.20	3.98	3.59
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH, MICRONAIRE												
Multiple Cor. Coef. ....	.85	.77	.71	.67	.62	.75	.81	.78	.91	.68	.62	.75
Partial Cor. Coef. for:												
Grayness.....	+0.10	+0.25	+0.36	+0.27	+0.15	+0.15	-0.14	-0.15	+0.55	-0.30	-0.46	-0.19
Yellowness.....	+0.11	+0.08	+0.11	+0.13	-0.03	-0.04	+0.12	+0.13	-0.33	-0.22	+0.29	+0.22
Nonlint (S.A.).....	+0.20	+0.29	+0.10	+0.14	-0.37	-0.38	+0.55	+0.55	+0.07	-0.09	-0.01	+0.34
2.5% span length.....	+0.68	+0.73	+0.62	+0.57	+0.10	+0.06	-0.04	-0.10	+0.90	-0.30	+0.09	+0.44
Micronaire.....	+0.12	+0.01	-0.40	-0.39	+0.17	+0.40	-0.36	-0.23	-0.31	+0.38	+0.13	+0.45
Beta Coefficients for:												
Grayness.....	+0.08*	+0.20*	+0.35	+0.26*	+0.15*	+0.12*	-0.10*	-0.12*	+0.32	-0.29*	-0.49	-0.16*
Yellowness.....	+0.01*	+0.06*	+0.09*	+0.11*	-0.03*	-0.03*	+0.08*	+0.09*	-0.16*	-0.18*	-0.27*	+0.17*
Nonlint (S.A.).....	+0.43	+0.27*	+0.10*	+0.15*	-0.44	-0.39	+0.54	+0.59	+0.04*	-0.10*	-0.01*	+0.34*
2.5% span length.....	+0.74	+0.84	+0.70	+0.64	+0.09*	+0.05*	-0.03*	-0.08*	+0.03	-0.28*	+0.09*	+0.40
Micronaire.....	+0.08*	+0.01*	-0.49	-0.49	+0.21*	+0.44	-0.35*	-0.23*	-0.21*	+0.47	+0.16*	+0.52
Regression Equation:												
Constant (a).....	+0.71	-5.11	+0.86	+0.65	+0.06	+0.06	+0.35	+0.53	-0.59	+0.27	+0.96	+0.43
Regression Coef. for:												
Grayness.....	+0.23	+0.43	+0.32	+0.22	+0.83	+0.50	-0.93	-0.46	+0.72	-0.31	-0.78	-0.14
Yellowness.....	+0.03	+0.09	+0.11	+0.12	-0.45	-0.88	+0.96	+0.47	-0.32	-0.90	+0.67	+0.61
Nonlint (S.A.).....	+0.36	+0.62	+0.04	+0.06	-0.64	-0.94	+0.47	+0.07	+0.22	-0.37	-0.03	+0.20
2.5% span length.....	+0.89	+0.26	+0.49	+0.45	+0.67	+0.83	-0.07	-0.98	+0.18	-0.76	+0.67	+0.71
Micronaire.....	-0.15	+0.93	-0.50	-0.47	+0.87	+0.34	-0.54	-0.51	-0.64	+0.25	+0.35	+0.26
Standard Error (+).....	12.54	4.65	.43	.42	6.38	9.06	15.28	8.70	3.05	3.87	3.94	3.21

*Statistically insignificant

Table 14.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 65 short staple samples, collected at triweekly intervals from selected gin points, crop of 1975

Statistical Items	Dependent Variables													
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn			
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Pct.	Index	Coarse 8s	Fine 22s		Coarse 8s	Fine 22s	Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.		Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable.....	6.6	308	98		7.4	6.3	122	106	40	20	43	92	102	104
2.5% span length.....	.95	.95	.95		.95	.95	.95	.95	.95	.95	.95	.95	.95	.95
Micronaire.....	3.6	3.6	3.6		3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Fiber str. (1/8" gage).....	22	22	22		22	22	22	22	22	22	22	22	22	22
Uniformity ratio.....	45	45	45		45	45	45	45	45	45	45	45	45	45
Elongation (1/8" gage).....	6.4	6.4	6.4		6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Standard Deviation (±) for:														
Dependent variable.....	1.15	19.2	7.3		.61	.56	8.1	13.7	26.1	14.0	7.5	5.3	5.0	4.8
2.5% span length.....	.07	.07	.07		.07	.07	.07	.07	.07	.07	.07	.07	.07	.07
Micronaire.....	.59	.59	.59		.59	.59	.59	.59	.59	.59	.59	.59	.59	.59
Fiber str. (1/8" gage).....	1.2	1.2	1.2		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Uniformity ratio.....	1.3	1.3	1.3		1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Elongation (1/8" gage).....	.59	.59	.59		.59	.59	.59	.59	.59	.59	.59	.59	.59	.59
Simple Correlation Coef. for:														
2.5% span length.....	-.69	.74	.73		.42	.35	.39	.43	-.43	-.44	.86	-.03	.27	.56
Micronaire.....	-.65	.38	.24		-.27	-.31	.50	.68	-.69	-.63	.20	.52	.44	.59
Fiber str. (1/8" gage).....	-.44	.71	.63		.14	.11	.27	.35	-.32	-.30	.61	.04	.19	.35
Uniformity ratio.....	-.07	-.07	.17		-.35	-.29	.09	.25	-.22	-.14	.27	.25	.04	.27
Elongation (1/8" gage).....	+1.0	-.03	+0.3		.54	.57	-.11	-.30	+.29	+.17	.15	-.48	-.11	.00
Multiple Cor. Data for:														
DEPENDENT VARIABLE with														
2.5% SPAN LENGTH, MICRONAIRE														
Multiple Cor. Coef. ....	.78	.74	.74		.69	.65	.52	.69	.70	.65	.90	.61	.44	.67
Partial Cor. Coef.														
2.5% span length.....	-.57	.68	.72		.66	.60	.19	.15	-.14	-.20	.90	-.37	.07	.38
Micronaire.....	-.50	+0.4	-.19		-.60	-.58	.38	.60	-.61	-.53	-.50	.61	.37	.45
Beta Coefficients for:														
2.5% span length.....	-.49	.72	.80		.73	.65	.20*	.13	-.12*	-.18*	+1.00	-.37	.07*	.35
Micronaire.....	-.41	+0.3*	-.15*		-.62	-.63	.40	.62	-.64	-.54	-.29	.70	.41	.42
Regression Equation:														
Constant (a).....	+17.79	+102.59	+19.19		+3.30	+3.12	+80.08	+28.13	+186.96	+102.13	-53.57	+97.36	+84.32	+66.78
Regression Coef. for:														
2.5% span length.....	-8.67	+211.03	+89.37		+6.77	+5.57	+23.36	+26.79	-47.13	-37.55	+115.42	-29.61	+5.26	+25.60
Micronaire.....	-.80	+1.07	-1.84		-.65	-.60	+5.56	+14.39	-28.20	-12.86	-3.67	+6.26	+3.48	+3.48
Standard Error (±).....	.72	12.92	4.90		.44	.43	6.91	9.90	18.58	10.66	3.29	4.21	4.51	3.59
DEPENDENT VARIABLE with														
2.5% SPAN LENGTH, MICRONAIRE														
FIBER STR. (1/8" GAGE)														
Multiple Cor. Coef. ....	.78	.79	.77		.71	.66	.52	.69	.70	.65	.90	.61	.44	.67
Partial Cor. Coef.														
2.5% span length.....	-.51	.47	.56		.66	.59	.15	.06	-.09	-.16	.84	-.35	.05	.34
Micronaire.....	-.50	+0.4	-.20		-.61	-.59	.38	.60	-.61	-.53	-.50	.61	.37	.45
Fiber str. (1/8" gage)....	+.08	.43	.29		-.25	-.19	.01	.10	-.04	.00	+1.2	.09	.01	-.05
Beta Coefficients for:														
2.5% span length.....	-.54	.47	.63		.89	.78	.18*	.06*	-.10*	-.18*	.96	-.43*	.06*	.38*
Micronaire.....	-.41	.02*	-.15*		-.62	-.62	.40	.62	-.64	-.54	-.29	.69	.41	.43
Fiber Str. (1/8" gage)....	+.06*	.39	+.26*		-.24*	-.20*	+.01*	+.10*	-.03*	.00*	+.07*	+.09*	+.01*	-.05*
Regression Equation:														
Constant (a).....	+17.19	+41.53	+3.33		+4.52	+4.03	+79.30	+16.65	+194.43	+101.61	-57.84	+93.36	+83.70	+68.88
Regression Coef. for:														
2.5% span length.....	-9.40	+136.56	+70.02		+8.26	+6.68	+22.40	+12.79	-38.01	-38.19	+110.21	-34.49	+4.51	+28.17
Micronaire.....	-.80	+.80	-1.91		-.64	-.59	+5.56	+14.34	-28.17	-12.86	-3.69	+6.24	+3.47	+3.49
Fiber str. (1/8" gage)...	+.06	.619	+1.61		-.12	-.09	.08	+1.16	-.76	+.05	.43	.41	.06	-.21
Standard Error (±).....	.72	11.68	4.69		.43	.42	6.91	9.85	18.57	10.66	3.27	4.19	4.51	3.59
*Statistically insignificant														

*Statistically insignificant

Table 14.--Continued

Statistical Items	Dependent Variables															
	Picker & card waste		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential		Color of 22s yarn			
	Pct.	Lbs.	Coarse 8s	Fine 22s	Pct.	Coarse 8s	Fine 22s	Index	Coarse 8s	Fine 22s	No.	Index	Gray yarn	Bleached yarn	Dyed yarn	Index
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE FIBER STR. (1/8" GAGE), UNIFORMITY RATIO																
Multiple Cor. Coef.....	.78	.79	.77	.69	.72	.69	.53	.69	.71	.65	.90	.64	.48			.70
Partial Cor. Coef. for:																
2.5% span length.....	-.49	+.42	+.53	+.62	+.67	+.62	+.11	+.05	-.06	-.12	+.82	-.40	-.02			+.40
Micronaire.....	-.42	+.04	-.17	-.60	-.59	-.60	+.35	+.51	-.56	-.49	+.46	+.61	+.41			+.21
Fiber str. (1/8" gage)...	+.06	+.42	+.28	-.26	-.29	-.26	+.04	+.11	-.06	-.03	+.08	+.16	+.07			-.14
Uniformity ratio.....	+.04	-.02	+.01	+.26	+.19	+.26	-.09	-.03	+.10	+.12	+.10	-.25	-.21			+.28
Beta Coefficients for:																
2.5% span length.....	-.53	+.46	+.63	+.83	+.91	+.83	+.15*	+.05*	-.06*	-.14*	+.99	-.50	-.02*			+.47
Micronaire.....	-.43	+.04*	-.16*	-.81	-.74	-.81	+.48*	+.64	-.70	-.63	-.33	+.88	+.58			+.23*
Fiber str. (1/8" gage)...	+.05*	+.39	+.26*	-.28*	-.30*	-.28*	+.04*	+.11*	-.06*	-.03*	+.05*	+.17*	+.09*			-.14*
Uniformity ratio.....	+.03*	-.02*	+.01*	+.27	+.18*	+.27	-.11*	-.03*	+.10*	+.12*	+.06*	-.27*	-.25*			+.28*
Regression Equation:																
Constant (a).....	+16.10	+54.51	+1.30	-.15	+1.43	-.15	+105.51	+30.43	+117.10	+49.39	-72.34	+135.50	+122.14			+28.05
Regression Coef. for:																
2.5% span length.....	-9.22	+133.42	+70.49	+7.09	+8.50	+7.09	+18.03	+10.47	-25.18	-29.47	+113.38	-40.67	-1.86			+34.44
Micronaire.....	-.85	+1.27	-1.98	-.77	-.77	-.77	+6.58	+14.88	-31.20	-14.90	-4.22	+7.93	+4.98			+1.86
Fiber str. (1/8" gage)...	+.05	+6.28	+1.59	-.13	-.15	-.13	+.29	+1.27	-1.40	-.37	+.32	+.76	+.38			-.55
Uniformity ratio.....	+.03	-.31	+.05	+.12	+.09	+.12	-.68	-.36	+2.00	+1.35	+.35	-1.11	-1.00			+1.07
Standard Error (±).....	.72	11.68	4.69	.41	.42	.41	6.88	9.84	18.48	10.59	3.25	4.06	4.41			3.44
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE FIBER STR. (1/8" GAGE), UNIFORMITY RATIO, ELONGATION (1/8" GAGE)																
Multiple Cor. Coef.....	.79	.80	.77	.75	.77	.75	.54	.69	.71	.66	.91	.66	.50			.72
Partial Cor. Coef. for:																
2.5% span length.....	-.40	+.32	+.46	+.51	+.59	+.51	+.04	+.04	-.04	-.04	+.78	-.30	-.09			+.28
Micronaire.....	-.44	+.14	-.09	-.41	-.40	-.41	+.37	+.45	-.50	-.49	-.33	+.42	+.42			+.31
Fiber str. (1/8" gage)...	-.01	+.45	+.29	-.11	-.15	-.11	+.09	+.10	-.07	-.09	+.14	+.07	+.13			-.03
Uniformity ratio.....	+.08	-.08	-.02	+.16	+.09	+.16	-.13	-.03	-.03	+.16	+.05	-.19	-.24			+.21
Elongation (1/8" gage)...	-.17	+.18	+.09	+.40	+.37	+.40	+.13	.00	-.03	-.16	+.17	-.20	+.16			+.25
Beta Coefficients for:																
2.5% span length.....	-.45	+.36*	+.59	+.63	+.74	+.63	+.06*	+.05*	-.05*	-.05*	+.93	-.39*	-.13*			+.34*
Micronaire.....	-.53	+.15*	-.10*	-.53	-.50	-.53	+.59	+.64	-.73	-.74	-.26*	+.73	+.72			+.40*
Fiber str. (1/8" gage)...	+.01*	+.46	+.29*	-.11*	-.15*	-.11*	+.11*	+.11*	-.08*	-.10*	+.09*	+.08*	+.17*			-.03*
Uniformity ratio.....	+.07*	-.06*	-.01*	+.15*	+.08*	+.15*	-.15*	-.03*	+.17*	+.17*	+.03*	-.21*	-.31*			+.21*
Elongation (1/8" gage)...	-.13*	+.14*	+.07*	+.36	+.32	+.36	+.14*	.00*	-.03*	-.15*	+.09*	-.19*	+.18*			+.22*
Regression Equation:																
Constant (a).....	+16.80	+44.69	-.70	-1.20	+.38	-1.20	+100.29	+30.32	+120.70	+58.80	-75.02	+140.33	+118.12			+23.03
Regression Coef. for:																
2.5% span length.....	-7.88	+106.65	+65.38	+5.42	+6.90	+5.42	+7.62	+10.24	-18.02	-10.69	+106.83	-31.69	-9.83			+24.89
Micronaire.....	-1.05	+.478	-1.30	-.51	-.52	-.51	+8.09	+14.91	-32.24	-17.62	-3.34	+6.60	+6.13			+3.27
Fiber str. (1/8" gage)...	-.01	+.733	+.80	-.05	-.07	-.05	+.74	+1.28	-1.70	+.59	+.72	+.72	+.72			-.13
Uniformity ratio.....	+.07	-.96	-.08	+.07	+.04	+.07	-.96	+.26	+2.19	+1.86	+.19	-.87	-1.21			+.81
Elongation (1/8" gage)...	-.26	+.458	+.89	+.34	+.33	+.34	+1.96	+.04	-1.35	-3.54	+1.15	-1.73	+1.50			+1.83
Standard Error (±).....	.70	11.48	4.67	.37	.39	.37	6.82	9.84	18.46	10.46	3.21	3.98	4.35			3.33
*Statistically insignificant																

*Statistically insignificant

Table 15.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 263 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1975

Statistical Items	Dependent Variables																		
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance			Yarn imperfections		Spinning Potential	Color of 22s yarn							
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Pct.	Index	No.	Coarse 22s	Fine 50s		No.	Index	Gray yarn	Bleached yarn	Dyed yarn			
	Pct.	Lbs.	Lbs.		Pct.	Index	No.	Index	No.	Index	No.	Index	Index	Index	Index	Index	Index	Index	Index
Mean Values for:																			
Dependent variable.....	5.8	108	36	5.9	4.4	97	23	76	18	60	92	105							
Grade index.....	93	93	93	93	93	93	93	93	93	93	93	93							
Staple length.....	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6							
Micronaire.....	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1							
Fiber strength (0 gage)....	86	86	86	86	86	86	86	86	86	86	86	86							
Uniformity ratio.....	45	45	45	45	45	45	45	45	45	45	45	45							
Standard Deviations (±) for:																			
Dependent variable.....	1.27	12.7	6.6	.54	.50	12.4	9.8	10.1	7.8	9.2	5.3	5.5							
Grade index.....	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2							
Staple length.....	.91	.91	.91	.91	.91	.91	.91	.91	.91	.91	.91	.91							
Micronaire.....	.54	.54	.54	.54	.54	.54	.54	.54	.54	.54	.54	.54							
Fiber strength (0 gage)....	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6							
Uniformity ratio.....	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7							
Simple Correlation Coef. for:																			
Grade index.....	-.60	.43	.39	.15	.28	.08	-.31	.03	-.30	.32	.65	.07							
Staple length.....	-.41	.54	.59	.11	.31	.23	-.31	.15	-.38	.60	.30	.05							
Micronaire.....	-.44	-.19	-.17	-.34	-.31	.55	-.48	.40	-.53	-.13	-.03	.15							
Fiber strength (0 gage)....	-.04	.63	.59	-.23	.00	-.12	-.02	-.14	-.06	.44	.39	-.18							
Uniformity ratio.....	-.45	.27	.29	-.18	-.01	.49	-.48	.39	-.54	.34	.09	.08							
Multiple Cor. Data for:																			
DEPENDENT VARIABLE with																			
GRADE INDEX, STAPLE LENGTH																			
Partial Cor. Coef. for:	.63	.58	.61	.16	.35	.23	.37	.15	.41	.61	.65	.08							
Grade index.....	-.52	.27	.20	.11	.18	-.02	-.21	-.04	-.17	.11	.61	.05							
Staple length.....	-.23	.44	.51	.05	.22	.22	-.21	.15	-.30	.54	.06	.03							
Beta Coefficients for:																			
Grade index.....	-.52	.25	.18	.12*	.18*	-.02*	-.22	-.04*	-.17*	.09*	.63	.06*							
Staple length.....	-.20	.43	.51	.06*	.24	.24	-.22	.17*	-.31	.56	.05*	.03*							
Regression Equation:																			
Constant (a).....	+27.22	-157.03	-113.46	+3.60	-1.67	-11.11	+142.63	+18.89	+134.55	-151.37	+23.82	+92.95							
Regression Coef. for:																			
Grade index.....	-.13	.60	.23	.01	.02	-.05	-.40	-.08	-.26	.16	.64	.06							
Staple length.....	-.28	.603	.370	.03	.13	.23	-2.36	+1.85	-2.67	.66	.27	.18							
Standard Error (±).....	.98	10.30	5.24	.53	.46	12.10	9.10	10.01	7.15	7.33	4.01	5.48							
DEPENDENT VARIABLE with																			
GRADE INDEX, STAPLE LENGTH, MICRONAIRE																			
Multiple Cor. Coef. for:	.70	.71	.73	.43	.57	.55	.54	.41	.59	.70	.67	.16							
Partial Cor. Coef. for:																			
Grade index.....	-.55	.32	.25	.13	.21	-.03	-.22	-.05	-.18	.13	.62	.05							
Staple length.....	-.11	.58	.64	.19	.38	.06	-.08	.03	-.17	.64	.11	-.02							
Micronaire.....	-.39	.49	.51	-.40	-.47	.51	-.43	.38	-.46	-.44	-.20	.14							
Beta Coefficients for:																			
Grade index.....	-.51	.26	.19	.13*	.19	-.03*	-.21	-.05*	-.17*	.10*	.64	.06*							
Staple length.....	-.10*	.58	.65	.20	.39	.06*	-.08*	.03*	-.16*	.69	.10*	-.02*							
Micronaire.....	-.32	.43	.43	-.42	-.47	.53	-.42	.40	-.45	-.38	-.16	.15*							
Regression Equation:																			
Constant (a).....	+25.07	-185.29	-128.22	+2.41	-2.89	+23.59	+120.88	+40.16	+116.20	-169.54	+19.40	+97.24							
Regression Coef. for:																			
Grade index.....	-.12	.63	.24	.01	.02	-.07	-.39	-.10	-.24	.18	.64	.06							
Staple length.....	-.13	.79	.472	.12	.21	.82	-.85	.38	-1.40	.92	.57	.12							
Micronaire.....	-.76	-.103	-5.24	-.42	-.43	+12.31	-7.72	+7.55	-6.51	-6.45	-1.57	-.02							
Standard Error (±).....	.91	8.96	4.52	.49	.41	10.38	8.22	9.26	6.35	6.57	3.93	5.42							

Table 15.--Continued

Statistical Items	Dependent Variables											
	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
	Pct.	Pct.	Pct.	Pct.	Index	Index	No.	No.		Gray yarn	Bleached yarn	Dyed yarn
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (O GAGE)												
Multiple Cor. Coef. ....	.72	.79	.61	.58	.57	.43	.55	.59	.72	.69	.26	.57
Partial Cor. Coef. for:												
Grade index.....	-.57	+25	+18	+20	-.01	-.03	-.23	-.18	+09	+61	+09	+15
Staple length.....	-.18	+50	+58	+34	+11	+08	-.11	-.18	+59	+03	+06	+14
Micronaire.....	-.36	-.48	-.48	-.50	+36	+36	-.45	-.45	-.42	+10	+10	+45
Fiber str. (o gage).....	+21	+51	+45	-.44	-.16	-.16	+08	+05	+22	+24	-.21	-.20
Beta Coefficients for:												
Grade index.....	-.55	+18	+13*	+19	-.01*	-.03*	-.22	-.17*	+07*	+61	+09*	+14*
Staple length.....	-.16*	+43	+53	+36	+12*	+09*	-.11*	-.18*	+62	+03*	+06*	+14*
Micronaire.....	-.29	-.36	-.37	-.50	+51	+37	-.41	-.44	-.35	+12*	+11*	+45
Fiber str. (o gage).....	+17	+40	+34	-.44	-.15*	-.16*	+08*	+04*	+18	+20	-.23	-.19
Regression Equation:												
Constant (a).....	+25.24	-182.04	-127.32	+2.61	+23.67	+40.31	+121.19	+116.33	-169.73	+18.60	+97.27	+66.80
Regression Coef. for:												
Grade index.....	-.13	+43	+16	+02	-.01	-.05	-.41	-.25	+13	+62	+10	+12
Staple length.....	-.22	+5.96	+3.82	+21	+1.57	+03	-1.16	-1.53	+6.26	+15	+39	+67
Micronaire.....	-.69	-8.38	-4.51	-.50	+11.71	+7.02	-7.47	-6.40	-5.92	-1.23	+1.11	+3.63
Fiber str. (o gage).....	+04	+91	+40	-.04	-.34	-.29	+14	+06	+29	+19	-.23	-.15
Standard Error (\pm).....	.88	7.71	4.05	.44	10.24	9.14	8.19	6.34	6.40	3.81	5.30	3.59
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (O GAGE), UNIFORMITY RATIO												
Multiple Cor. Coef. ....	.73	.83	.82	.58	.60	.48	.58	.62	.77	.69	.26	.58
Partial Cor. Coef. for:												
Grade index.....	-.59	+28	+21	+20	.00	-.02	-.22	-.20	+11	+61	+09	+16
Staple length.....	-.12	+43	+52	+32	+04	+01	-.04	-.10	+54	+04	+05	+10
Micronaire.....	-.19	-.58	-.59	-.43	+31	+17	-.23	-.25	-.56	-.11	+07	+32
Fiber str. (o gage).....	+25	+49	+42	-.44	-.20	-.20	+12	+09	+17	+24	-.21	-.22
Uniformity ratio.....	-.21	+38	+38	+02	+25	+23	-.22	-.25	+41	-.03	+02	+13
Beta Coefficients for:												
Grade index.....	-.55	+19	+13	+19	.00*	-.02*	-.23	-.18	+08*	+61	+10*	+14*
Staple length.....	-.10*	+34	+44	+35	+04*	+01*	-.04*	-.10*	+52	+03*	+06*	+10*
Micronaire.....	-.18	-.54	-.55	-.52	+35	+21*	-.26	-.27	-.57	-.11*	+10*	+36
Fiber str. (o gage).....	+20	+36	+30	-.44	-.19	-.20	+11*	+08*	+12*	+20	-.23	-.21
Uniformity ratio.....	-.21	+33	+33	+03*	+29	+30	-.27	-.30	+40	-.03*	+02*	+15*
Regression Equation:												
Constant (a).....	+28.14	-226.95	-150.83	+2.46	-15.00	+7.97	+149.46	+141.58	-209.61	+20.49	+95.91	+59.66
Regression Coef. for:												
Grade index.....	-.13	+45	+17	+02	.00	-.04	-.43	-.26	+14	+62	+10	+12
Staple length.....	-.14	+4.77	+3.20	+21	+54	+17	-.41	-.87	+5.20	+20	+35	+48
Micronaire.....	-.42	-12.65	-6.75	-.52	+8.00	+3.92	-4.77	-3.99	-9.74	-1.04	+98	+2.95
Fiber str. (o gage).....	+04	+81	+35	-.04	-.42	-.36	+20	+12	+21	+19	-.23	-.16
Uniformity ratio.....	-.16	+2.47	+1.30	+01	+2.14	+1.79	-1.56	-1.39	+2.21	-.11	+08	+40
Standard Error (\pm).....	.86	7.15	3.75	.44	9.93	8.89	7.99	6.12	5.85	3.81	5.30	3.56

*Statistically insignificant

Table 16.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests on 263 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1975

Statistical Items	Dependent Variables											
	Picker & card waste		Yarn skein strength			Yarn elongation		Yarn appearance			Yarn imperfections	
	Pct.	Lbs.	Coarse 22s	Fine 50s	Lbs.	Pct.	Coarse 22s	Index	Coarse 22s	Fine 50s	No.	Spinning Potential
Mean Values for:												
Dependent variable.....	5.8	108	36	4.4	5.9	4.4	97	76	23	18	60	103
Grayness.....	2	2	2	2	2	2	2	2	2	2	2	2
Yellowness.....	3	3	3	3	3	3	3	3	3	3	3	3
Nonlint content (S.A.).....	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
2.5% span length.....	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Micronaire.....	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Standard Deviation (\pm) for:												
Dependent variable.....	1.27	12.7	6.6	.50	.54	.50	12.4	10.1	9.8	7.8	9.2	4.4
Grayness.....	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Yellowness.....	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6
Nonlint content (S.A.).....	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
2.5% span length.....	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Micronaire.....	.54	.54	.54	.54	.54	.54	.54	.54	.54	.54	.54	.54
Simple Correlation Coef. for												
Grayness.....	.37	.55	.54	-.39	-.21	-.39	.16	.13	.08	.07	.41	-.23
Yellowness.....	.07	.30	-.31	-.27	-.11	-.27	-.11	-.11	.12	.15	-.33	.14
Nonlint content (S.A.).....	.72	-.43	-.41	-.32	-.27	-.32	-.27	-.20	.47	.47	-.44	-.28
2.5% span length.....	-.33	.53	.58	.31	.13	.31	.14	.09	-.25	-.31	.62	.27
Micronaire.....	-.44	-.19	-.17	-.31	-.34	-.31	.55	.40	-.48	-.53	-.13	.52
Multiple Cor. Data for:												
DEPENDENT VARIABLE with												
GRAYNESS, YELLOWNESS												
Multiple Cor. Coef. ....	.37	.57	.56	.43	.30	.43	.22	.20	.13	.15	.47	.31
Partial Cor. Coef. for:												
Grayness.....	.36	.51	.50	-.35	-.15	-.35	.19	.17	.05	.03	-.35	-.28
Yellowness.....	-.03	-.19	-.20	-.19	-.23	-.19	-.16	-.15	.10	.13	-.25	.22
Beta Coefficients for:												
Grayness.....	.37	.50	.49	-.35	-.14*	-.35	.20	.18*	.05*	.04*	-.35	-.29
Yellowness.....	-.03*	-.17	-.18	-.18	-.23	-.18	-.17*	-.16*	.10*	.14*	-.23	.22
Regression Equation:												
Constant (a).....	.525	+128.67	+46.97	+5.08	+6.68	+5.08	+103.09	+80.71	+17.65	+12.52	+75.69	+100.54
Regression Coef. for												
Grayness.....	.44	.58	.2.99	-.16	-.07	-.16	.230	.165	.47	.25	-.2.94	-.1.15
Yellowness.....	-.07	-.3.86	-.2.11	-.16	-.22	-.16	.3.77	-.2.89	.82	.1.95	-.3.90	-.1.72
Standard Error (\pm).....	1.18	10.39	5.45	.45	.51	.45	12.12	9.92	9.70	7.75	8.15	4.15
DEPENDENT VARIABLE with												
GRAYNESS, YELLOWNESS,												
NONLINT (S.A.)												
Multiple Cor. Coef. ....	.73	.59	.58	.45	.31	.45	.48	.38	.52	.53	.51	.34
Partial Cor. Coef. for:												
Grayness.....	-.03	-.38	-.38	-.24	-.09	-.24	.40	.32	-.25	-.27	-.19	-.17
Yellowness.....	-.07	-.19	-.20	-.18	-.22	-.18	-.17	-.15	.10	.14	-.25	.22
Nonlint (S.A.).....	.67	.19	.16	-.14	-.06	-.14	.43	-.33	.51	.51	-.25	.15
Beta Coefficients for:												
Grayness.....	-.03*	.40	.40	-.27	-.11*	-.27	.47	.39	.27	.29	-.21	-.19*
Yellowness.....	-.05*	.16	.17	-.17	-.23	-.17	-.15*	-.15*	.09	.12*	-.23	.22
Nonlint (S.A.).....	.75	.19	-.16*	-.15*	-.07*	-.15*	-.50	-.39	.60	.61	-.26	-.17*
Regression Equation:												
Constant (a).....	.341	+133.24	+49.04	+5.23	+6.76	+5.23	+115.16	+88.37	+6.26	+3.30	+80.34	+101.98
Regression Coef. for:												
Grayness.....	-.03	.4.71	-.2.46	-.12	-.05	-.12	.5.40	.3.61	-.2.45	-.2.11	-.1.74	-.78
Yellowness.....	-.12	-.3.75	-.2.06	-.16	-.22	-.16	.3.46	-.2.70	.1.53	.1.71	-.3.78	.1.76
Nonlint (S.A.).....	.90	-.2.23	-.1.01	-.07	-.04	-.07	-.5.90	-.3.74	.5.57	.4.51	-.2.27	-.70
Standard Error (\pm).....	.87	10.21	5.38	.44	.51	.44	10.94	9.36	8.36	6.65	7.90	4.10

*Statistically insignificant

Table 16.--Continued

Statistical Items	Dependent Variables														
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn				
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Pct.	Coarse 22s	Fine 50s	Pct.		Coarse 22s	Fine 50s	Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Ibs.	Ibs.	Pct.	Pct.	Index	Index	Index	No.	No.	Index	Index	Index	Index	
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH															
Multiple Cor. Coef.....	.74	.66	.68	.31	.46	.49	.39	.53	.56	.67	.81	.16	.42		
Partial Cor. Coef. for:															
Grayness.....	-.07	-.31	-.29	-.09	-.19	+.41	+.33	-.28	-.32	-.09	-.74	+.07	-.09		
Yellowness.....	-.12	-.10	-.09	-.22	-.15	-.13	-.13	+.06	+.08	-.13	+.14	+.02	+.28		
Nonlint (S.A.).....	+.66	-.13	-.09	-.07	-.12	-.41	-.32	+.49	+.49	-.18	.00	-.05	-.11		
2.5% span length.....	-.18	+.37	+.44	-.01	+.13	+.11	+.06	-.15	-.23	+.50	.00	+.14	+.26		
Beta Coefficients for:															
Grayness.....	-.06*	-.30	-.28	-.11*	-.22	+.51	+.41	-.31	-.34	-.09*	-.83	+.09*	-.10*		
Yellowness.....	-.09*	-.08*	-.07*	-.23	-.14*	-.13*	-.13*	+.05*	+.07*	-.11*	+.09*	+.02*	+.29		
Nonlint (S.A.).....	+.72	-.12*	+.08*	-.08*	-.13*	-.48	-.38	+.57	+.56	-.17*	.00*	-.06*	-.12*		
2.5% span length.....	-.14*	+.33	+.41	-.01*	+.13*	+.11*	+.07*	-.15*	-.22	+.48	.00*	+.16*	+.27		
Regression Equation:															
Constant (a).....	+8.54	+8.87	-29.50	+6.92	+3.33	+74.62	+68.67	+48.00	+53.29	-49.91	+97.37	+81.40	+66.82		
Regression Coef. for:															
Grayness.....	-.07	-3.56	-1.73	-.05	-.10	+5.85	+3.85	-2.84	-2.49	-.74	-4.06	+.44	-.41		
Yellowness.....	-.20	-1.85	-.87	-.22	-.13	-2.85	-2.40	+.90	+.95	-1.79	+.82	+.20	+.29		
Nonlint (S.A.).....	+.87	-1.46	-.52	-.04	-.06	-5.65	-3.62	+5.31	+4.20	-1.47	.00	-.32	-.49		
2.5% span length.....	-.43	+105.16	+66.40	-.14	+1.60	+34.17	+16.57	-35.30	-42.39	+110.43	-.13	+21.24	+29.65		
Standard Error (±).....	.86	9.49	4.83	.51	.44	10.87	9.34	8.27	6.48	6.84	3.07	5.42	3.96		
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH, MICRONAIRE															
Multiple Cor. Coef.....	.77	.76	.78	.50	.63	.64	.49	.62	.65	.77	.81	.18	.62		
Partial Cor. Coef. for:															
Grayness.....	+.03	-.16	-.14	+.07	-.01	+.29	+.21	-.17	-.20	+.09	-.72	+.03	-.28		
Yellowness.....	-.08	-.04	-.03	-.18	-.10	-.22	-.18	+.11	+.14	-.08	+.13	+.01	+.26		
Nonlint (S.A.).....	+.61	-.31	-.28	-.21	-.29	-.30	-.22	+.41	+.41	-.37	.00	-.02	+.06		
2.5% span length.....	-.05	+.54	+.60	+.16	+.33	-.09	-.07	.00	-.07	+.65	-.01	+.10	+.07		
Micronaire.....	-.32	-.50	-.52	-.42	-.49	+.48	+.33	-.36	-.40	-.53	+.01	+.09	+.50		
Beta Coefficients for:															
Grayness.....	+.03*	-.14*	-.12*	+.09*	-.01*	+.31	+.26	-.18*	-.21	+.08*	-.84	+.04*	-.31		
Yellowness.....	-.06*	-.03*	-.02*	-.17*	-.08*	-.18	-.17	+.09*	+.11*	-.05*	+.08*	+.01*	+.23		
Nonlint (S.A.).....	+.64	-.27	-.24	-.24	-.30	-.31	-.25	+.45	+.43	-.33	.00*	-.02*	+.07*		
2.5% span length.....	-.04*	+.51	+.58	+.17*	+.33	-.08*	-.08*	.00*	-.07*	+.66	.00*	+.11*	+.06*		
Micronaire.....	-.25	-.44	-.44	-.46	-.50	+.48	+.35	-.35	-.38	-.45	+.01*	-.10*	+.53		
Regression Equation:															
Constant (a).....	+7.53	-9.07	-38.85	+6.10	+2.51	+94.32	+80.51	+36.78	+43.75	-63.28	+97.50	+83.26	+74.33		
Regression Coef. for:															
Grayness.....	+.03	-1.61	-.71	+.04	-.01	+3.59	+2.46	-1.62	-1.50	+.65	-4.08	+.22	-1.26		
Yellowness.....	-.13	-.66	-.24	-.17	-.07	-4.14	-3.17	+.164	+1.59	-.89	+.81	+.08	+.180		
Nonlint (S.A.).....	+.76	-3.28	-1.47	-.12	-.14	-3.67	-2.44	+4.17	+3.22	-2.84	+.01	-.13	+.27		
2.5% span length.....	-1.25	+159.80	+94.90	+2.32	+.06	-25.16	-18.85	-1.12	-13.03	+151.56	-.51	+15.65	+6.97		
Micronaire.....	-.58	-10.27	-5.36	-.46	-.46	+11.15	+6.65	-6.42	-5.52	-7.73	+.07	+1.05	+4.26		
Standard Error (±).....	.81	8.20	4.14	.46	.38	9.96	8.81	7.71	5.95	5.82	3.07	5.40	3.43		

*Statistically insignificant

Table 17.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurement with processing tests performed on 263 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1975

Statistical Items	Dependent Variables											
	Picker & card waste		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	
	Pct.	Ibs.	Coarse 22s	Fine 50s	Coarse 22s	Pct.	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	No.	Index
Mean Values for:												
Dependent variable.....	5.8	108	1.09	36	5.9	4.4	97	76	23	18	60	105
2.5% span length.....	1.09	1.09	4.1	1.09	4.1	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Micronaire.....	4.1	4.1	23	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Fiber str. (1/8" gage)....	23	23	45	23	45	23	23	23	23	23	23	23
Uniformity ratio.....	45	45	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Elongation (1/8" gage)....	6.4	6.4										
Standard Deviation (+) for												
Dependent variable.....	.27	12.7	.04	6.6	.54	.50	12.4	10.1	9.8	7.8	9.2	5.3
2.5% span length.....	.04	.04	.54	.04	.04	.04	.04	.04	.04	.04	.04	.04
Micronaire.....	.54	.54	2.0	.54	.54	.54	.54	.54	.54	.54	.54	.54
Fiber str. (1/8" gage)....	2.0	2.0	1.7	2.0	1.7	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Uniformity ratio.....	1.7	1.7	.72	.72	.72	.72	.72	.72	.72	.72	.72	.72
Elongation (1/8" gage)....	.72	.72										
Simple Correlation Coef. for:												
2.5% span length.....	-.33	+.53	-.19	+.58	+.13	+.31	+.14	+.09	-.25	-.31	+.62	+.27
Micronaire.....	-.44	-.19	+.85	-.17	-.34	-.31	-.15	+.40	-.48	-.13	-.53	+.15
Fiber str. (1/8" gage)....	-.17	+.85	+.27	+.83	+.12	+.39	-.16	-.15	-.03	-.08	+.70	-.04
Uniformity ratio.....	-.45	+.27	-.12	+.29	-.18	-.01	+.49	+.39	-.48	-.54	+.34	+.09
Elongation (1/8" gage)....	-.12	-.13		-.10	+.57	+.43	+.12	+.20	-.06	-.05	.00	-.04
Multiple Cor. Data for:												
DEPENDENT VARIABLE with												
2.5% SPAN LENGTH, MICRONAIRE												
Multiple Cor. Coef. ....	.48	.66		.70	.43	.54	.55	.41	.49	.54	.72	.30
Partial Cor. Coef. for:												
2.5% span length.....	-.21	+.64	-.47	+.69	+.28	+.47	-.07	-.06	-.09	-.16	+.71	+.30
Micronaire.....	-.36	-.47		-.49	-.41	-.47	+.54	+.40	-.44	-.47	-.47	-.14
Beta Coefficients for:												
2.5% span length.....	-.21	+.68	-.43	+.73	+.28	+.47	-.07*	-.06*	-.09*	-.14*	+.76	+.32
Micronaire.....	-.36	-.43		-.43	-.44	-.47	+.57	+.42	-.45	-.48	-.39	-.14*
Regression Equation:												
Constant (a).....	+16.43	-82.05		-72.09	+3.62	-.17	+63.67	+50.14	+80.84	+77.36	-100.37	+52.21
Regression Coef. for:												
2.5% span length.....	-6.47	+212.52		+119.24	+3.79	+5.83	-20.21	-14.57	-21.15	-27.55	+177.52	+42.23
Micronaire.....	-.86	-10.08		-5.29	-.44	-.44	+13.21	+8.00	-8.24	-6.95	-6.74	-1.37
Standard Error (±).....	1.11	9.51		4.70	.45	.42	10.37	9.25	8.52	6.55	6.41	5.04
DEPENDENT VARIABLE with												
2.5% SPAN LENGTH, MICRONAIRE												
FIBER STR. (1/8" GAGE)												
Multiple Cor. Coef. ....	.49	.88		.88	.43	.56	.56	.42	.49	.55	.81	.51
Partial Cor. Coef. for:												
2.5% span length.....	-.11	+.39	-.39	+.50	+.27	+.33	+.01	+.02	-.06	-.09	+.54	+.02
Micronaire.....	-.38	-.39		-.43	-.41	-.42	+.50	+.36	-.43	-.47	-.37	+.00
Fiber str. (1/8" gage)....	-.13	+.77		+.75	-.07	+.17	-.12	-.12	-.03	-.07	+.52	+.44
Beta Coefficients for:												
2.5% span length.....	-.12*	+.26	-.23	+.35	+.33	+.37	+.01*	+.02*	-.07*	-.10*	+.50	+.03*
Micronaire.....	-.40	-.23		-.25	-.46	-.43	+.54	+.39	-.46	-.50	-.27	+.00*
Fiber str. (1/8" gage)....	-.14*	+.70		+.64	-.08*	+.17*	-.12*	-.13*	-.03*	-.07*	+.44	+.50
Regression Equation:												
Constant (a).....	+16.05	-62.95		-62.93	+3.53	+.02	+60.44	+55.26	+80.24	+76.25	-91.67	+57.93
Regression Coef. for:												
2.5% span length.....	-3.90	+82.34		+56.78	+.41	+.55	+1.84	+5.01	-17.08	-19.97	+113.17	+3.29
Micronaire.....	-.95	-5.40		-3.05	-.46	-.39	+12.42	+7.30	-8.38	-7.23	-4.61	+.03
Fiber str. (1/8" gage)....	1.10	+4.42		+2.12	-.02	+.04	-.75	-.66	-.14	-.26	+2.02	+1.32
Standard Error (±).....		6.04		3.11	.48	.41	10.29	9.19	8.52	6.57	5.46	4.54

*Statistically insignificant

Statistical Items	Dependent Variables															
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn					
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Pct.	Index	No.	Coarse 22s		Fine 50s	No.	Index	No.	Index	Index
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO																
Multiple Cor. Coef. ....	.51	.89		.90	.43	.57	.62	.49	.53	.59	.84	.52	.21		.57
Partial Cor. Coef. for:																
2.5% span length.....	-.04	+.40	+.51	+.28	+.26	-.13	-.10	-.10	+.04	+.02	+.56	+.06	+.14	+.09	+.09	
Micronaire.....	-.21	-.51	-.55	-.39	-.33	+.26	+.13	+.13	-.22	-.24	-.54	+.07	+.06	+.25	+.25	
Fiber str. (1/8" gage)....	-.07	+.74	+.72	+.13	-.06	-.22	-.20	-.20	+.05	+.03	+.44	+.44	-.09	-.21	-.21	
Uniformity ratio.....	-.16	+.35	+.38	+.10	-.01	+.30	+.27	+.27	-.24	-.28	+.43	-.10	-.01	+.17	+.17	
Beta Coefficients for:																
2.5% span length.....	-.05*	+.25	+.33	+.33	+.34	-.15*	-.13*	-.13*	+.05*	+.02*	+.47	+.07*	+.19*	+.10*	+.10*	
Micronaire.....	-.27	-.38	-.41	-.50	-.45	+.31	+.16*	+.16*	-.27	-.28	-.50	+.08*	+.09*	+.31	+.31	
Fiber str. (1/8" gage)....	-.08*	+.63	+.57	+.14*	-.07*	-.23	-.23	-.23	+.06*	+.03*	+.33	+.54	-.12*	-.22	-.22	
Uniformity ratio.....	-.20*	+.24	+.26	+.12*	-.01*	+.36	+.35	+.35	-.30	-.33	+.37	-.13*	-.02*	+.20*	+.20*	
Regression Equation:																
Constant (a).....	+18.25	-113.66	-91.09	-.54	+3.58	+30.56	+31.42	+102.59	+97.52	-146.80	+63.51	+83.28		+68.09	+68.09	
Regression Coef. for:																
2.5% span length.....	-1.55	+78.39	+54.21	+4.04	+4.48	-46.27	-32.56	+11.10	+4.48	+107.17	+9.39	+25.85	+25.85	+11.33	+11.33	
Micronaire.....	-.64	-8.97	-5.06	-.46	-.45	+7.07	+3.08	-4.93	-4.11	-8.61	+.82	+.93	+.93	+2.52	+2.52	
Fiber str. (1/8" gage)....	-.05	+3.98	+1.88	+.03	-.02	-1.40	-1.18	+.28	+.12	+1.53	+1.42	-.32	-.32	-.48	-.48	
Uniformity ratio.....	-.15	+1.79	+1.01	+.04	.00	+2.69	-2.11	-1.73	-1.56	+2.01	-.40	-.07	-.07	+.53	+.53	
Standard Error (±).....	1.09	.567	2.87	.41	.48	9.80	8.85	8.27	6.31	4.93	4.52	5.37	5.37	3.60	3.60	
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO, ELONGATION (1/8" GAGE)																
Multiple Cor. Coef. ....	.56	.90		.91	.71	.76	.63	.53	.55	.61	.86	.53	.31		.59
Partial Cor. Coef. for:																
2.5% span length.....	-.01	+.38	+.49	+.25	+.22	-.16	-.14	-.14	+.06	+.04	+.55	+.04	+.11	+.06	+.06	
Micronaire.....	-.25	-.49	-.54	-.39	-.31	+.28	+.16	+.16	-.23	-.25	-.53	+.08	+.10	+.28	+.28	
Fiber str. (1/8" gage)....	-.15	+.75	+.74	+.37	+.17	-.16	-.13	-.13	+.01	-.02	+.50	+.46	+.14	-.14	-.14	
Uniformity ratio.....	-.17	+.35	+.39	+.13	-.01	+.31	+.28	+.28	-.24	-.10	+.44	-.10	-.02	+.17	+.17	
Elongation (1/8" gage)....	-.25	+.18	+.22	+.61	+.63	+.18	+.24	+.24	-.14	-.15	+.29	+.13	+.23	+.20	+.20	
Beta Coefficients for:																
2.5% span length.....	-.01*	+.23	+.31	+.23	+.23	-.18*	-.17*	-.17*	+.07*	+.05*	+.44	+.05*	+.15*	+.07*	+.07*	
Micronaire.....	-.32	-.37	-.39	-.41	-.34	+.33	+.21*	+.21*	-.29	-.31	-.47	+.11*	+.14*	+.34	+.34	
Fiber Str. (1/8" gage)....	-.17*	+.66	+.61	+.35	-.16*	-.17*	-.14*	-.14*	+.01*	-.02*	+.40	+.58	-.02*	-.15*	-.15*	
Uniformity ratio.....	-.20*	+.24	+.26	+.12*	-.01*	+.36	+.35	+.35	-.30	-.33	+.36	-.13*	-.02*	+.20*	+.20*	
Elongation (1/8" gage)....	-.23	+.08	+.10	+.54	+.60	+.15*	+.23	+.23	-.13*	-.13*	+.16	+.12*	+.24	+.17	+.17	
Regression Equation:																
Constant (a).....	+21.15	-124.20	-97.74	-3.16	+3.38	+12.07	+8.77	+114.83	+107.75	-161.57	+57.44	+70.36		+60.70	+60.70	
Regression Coef. for:																
2.5% span length.....	-.22	+.73.51	+51.14	+2.84	+3.01	-54.75	-42.95	+16.72	+9.18	+19.92	+6.60	+19.92	+19.92	+7.94	+7.94	
Micronaire.....	-.74	-8.60	-4.83	-.37	-.34	+7.71	+3.87	-5.36	-4.47	+1.33	+1.03	+1.33	+1.33	+2.78	+2.78	
Fiber str. (1/8" gage)....	-.11	+4.20	+2.01	+.09	-.04	-1.03	-.73	+.04	-.08	-.06	+1.54	-.06	-.06	-.34	-.34	
Uniformity ratio.....	-.15	+1.79	+1.01	+.04	.00	+2.68	+2.11	-1.73	-1.56	-.07	-.40	-.40	-.40	+.53	+.53	
Elongation (1/8" gage)....	-.41	+1.48	+.93	+.37	+.45	+2.59	+3.17	-1.72	-1.43	+1.81	+.85	+1.81	+1.81	+1.03	+1.03	
Standard Error (±).....	1.05	.598	2.80	.38	.38	9.65	8.58	8.19	6.23	4.73	4.48	5.23	5.23	3.53	3.53	
*Statistically insignificant																

*Statistically insignificant

Table 18.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 41 long staple samples, carded yarns, collected at triweekly intervals from selected gin points, crop of 1975

Statistical Items	Dependent Variables													
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		Dyed yarn	
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Pct.	Index	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn		
														No.	Index	No.	Index
Mean Values for:														
Dependent variable.....	9.1	113	39	39	4.3	5.1	99	75	28	21	69	91	106	
Grade index.....	92	92	92	92	92	92	92	92	92	92	92	92	92	
Staple length.....	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	
Micronaire.....	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	
Fiber strength (0 gage).....	89	89	89	89	89	89	89	89	89	89	89	89	89	
Uniformity ratio.....	44	44	44	44	44	44	44	44	44	44	44	44	44	
Standard Deviation (±) for														
Dependent variable.....	1.33	23.2	11.4	11.4	.66	.60	19.6	11.9	16.8	12.7	17.6	5.7	6.4	
Grade index.....	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	
Staple length.....	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	
Micronaire.....	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	
Fiber strength (0 gage).....	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
Uniformity ratio.....	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Simple Correlation Coef. for:														
Grade index.....	-.54	+.77	+.76	+.76	+.70	+.70	-.35	-.32	+.17	+.22	+.76	+.71	+.01	
Staple length.....	+.26	+.85	+.85	+.85	+.76	+.73	-.57	-.51	+.46	+.51	+.83	+.48	+.38	
Micronaire.....	+.15	-.75	-.76	-.76	-.78	-.78	+.83	+.75	-.65	-.68	-.82	-.54	-.31	
Fiber strength (0 gage).....	-.44	+.82	+.84	+.84	+.70	+.68	-.47	-.44	+.31	+.36	+.77	+.59	+.39	
Uniformity ratio.....	-.36	+.60	+.59	+.59	+.50	+.50	-.11	-.04	+.21	+.21	+.55	+.37	+.35	
Multiple Cor. Data for:														
DEPENDENT VARIABLE with														
GRADE INDEX, STAPLE LENGTH														
Multiple Cor. Coef. for:	.56	.89	.90	.90	.81	.79	.57	.51	.49	.53	.88	.71	.19	
Partial Cor. Coef. for:														
Grade index.....	-.51	+.54	+.53	+.53	+.42	+.43	+.02	+.02	-.18	-.16	+.53	+.60	+.40	
Staple length.....	+.14	+.71	+.73	+.73	+.56	+.51	-.48	-.42	+.46	+.49	+.69	+.03	+.05	
Beta Coefficients for:														
Grade index.....	-.64	+.38	+.36	+.36	+.36*	+.39*	+.03*	+.02*	-.21*	-.18*	+.38	+.70	+.18*	
Staple length.....	+.15*	+.60	+.62	+.62	+.53	+.48	-.58	-.52	+.60	+.63	+.59	+.02*	-.25*	
Regression Equation:														
Constant (a).....	+15.90	-363.85	-198.51	-198.51	-7.79	-5.09	+381.67	+229.29	-177.10	-149.47	-286.08	+33.08	+131.59	
Regression Coef. for:														
Grade index.....	-.13	+1.33	+.63	+.63	+.04	+.04	+.08	+.03	-.55	-.36	+.102	+.60	+.17	
Staple length.....	+.15	+10.02	+5.08	+5.08	+.25	+.21	-8.21	-4.45	+.72	+.75	+.742	+.10	-.16	
Standard Error (±).....	1.11	10.47	5.07	5.07	.39	.37	16.11	10.20	14.71	10.83	8.22	3.97	6.32	
DEPENDENT VARIABLE with														
GRADE INDEX, STAPLE LENGTH														
MICRONAIRE														
Multiple Cor. Coef. for:	.58	.93	.93	.93	.88	.87	.87	.79	.74	.77	.95	.73	.29	
Partial Cor. Coef. for:														
Grade index.....	-.54	+.45	+.44	+.44	+.29	+.31	+.43	+.32	-.45	-.44	+.45	+.55	+.20	
Staple length.....	+.07	+.69	+.71	+.71	+.49	+.42	-.40	-.29	+.35	+.40	+.70	-.05	+.38	
Micronaire.....	-.21	-.55	-.57	-.57	-.59	-.59	+.80	+.69	-.64	-.65	-.72	-.23	-.00	
Beta Coefficients for:														
Grade index.....	-.72	+.27	+.25*	+.25*	+.20*	+.22*	+.33*	+.29*	-.47	-.44*	+.23	+.62	+.28*	
Staple length.....	+.08*	+.49	+.51	+.51	+.37	+.32*	-.30*	-.26*	+.35*	+.39*	+.23	-.05*	+.49*	
Micronaire.....	-.22*	-.32	-.33	-.33	-.45	-.47	+.85	+.77	-.72	-.71	-.43	-.21*	+.06*	
Regression Equation:														
Constant (a).....	+22.00	-211.81	-121.39	-121.39	-1.67	+.72	+38.43	+41.50	+73.05	+38.28	-128.42	+57.76	+93.35	
Regression Coef. for:														
Grade index.....	-.15	+.94	+.43	+.43	+.02	+.02	+.97	+.52	-.120	-.84	+.61	+.53	+.27	
Staple length.....	+.07	+.823	+.417	+.417	+.18	+.14	-.16	-.23	+.46	+.54	+.56	-.19	+.17	
Micronaire.....	-.55	-13.79	-.70	-.70	-.55	-.53	+31.14	+17.04	-22.69	-17.02	-14.30	-.247	+.03	
Standard Error (±).....	1.09	8.77	4.15	4.15	.31	.30	9.60	7.34	11.30	8.19	5.68	3.86	6.16	

Statistically insignificant

*Statistically insignificant

Statistical Items	Dependent Variables											
	Picker & card waste		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning potential	
	Pct.	Lbs.	Coarse 22s	Fine 50s	Pct.	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	No.	No.	Index
DEPENDENT VARIABLE with												
GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (O GAGE)												
Multiple Cor. Coef. ....	.60	.94		.95	.87		.79	.74	.77	.95		.74
Partial Cor. Coef. for:												
Grade index.....	-.42	+26	+21	+18	+22	+46	+35	-.43	-.42	+28		+16
Staple length.....	+15	+60	+64	+40	+35	-.31	-.21	+31	+35	+62		-.12
Micronaire.....	-.22	-.58	-.63	-.59	-.59	+80	+69	-.64	-.65	-.74		+23
Fiber str. (O gage).....	-.20	+49	+58	+21	+14	-.16	-.15	+05	+06	+35		+03
Beta Coefficients for:												
Grade index.....	-.59*	+14*	+10*	+13*	+17*	+37	+35*	-.49*	-.46*	+14*		+54
Staple length.....	+18*	+38	+37	+31*	+28*	-.24*	-.20*	+33*	+36*	+37		-.17*
Micronaire.....	-.24*	-.30	-.31	-.44	-.46	+84	+76	-.72	-.20*	-.42		+29*
Fiber str. (O gage).....	-.26*	+30	+34	+16*	+11*	-.13*	-.15*	+05*	+06*	+18*		+05*
Regression Equation:												
Constant (a).....	+22.55	-231.03	-131.99	-1.98	+52	+48.66	+47.65	+70.74	+36.24	-135.23		+54.96
Regression Coef. for:												
Grade index.....	-.12	+49	+17	+01	+02	+1.10	+63	-1.26	-.90	+38		+25
Staple length.....	+17	+6.27	+3.07	+15	+12	-3.44	-1.72	+4.00	+3.32	+4.65		-.81
Micronaire.....	-.59	-13.04	-6.57	-.54	-.52	+30.86	+16.84	-22.59	-16.95	-13.95		+3.51
Fiber str. (O gage).....	-.07	+1.43	+80	+02	+01	-.52	-.37	+19	+16	+67		+22
Standard Error (\pm).....	1.06	7.65	3.38	.31	.30	9.47	7.26	11.28	8.18	5.32		6.15
DEPENDENT VARIABLE with												
GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (O GAGE), UNIFORMITY RATIO												
Multiple Cor. Coef. ....	.60	.96		.97	.90	.88	.79	.79	.80	.97		.74
Partial Cor. Coef. for:												
Grade index.....	-.40	+12	+05	+07	+10	+46	+32	-.53	-.50	+14		+21
Staple length.....	+15	+53	+58	+29	+22	-.27	-.22	+18	+24	+57		-.13
Micronaire.....	-.18	-.74	-.77	-.68	-.69	+78	+64	-.71	-.70	-.85		-.23
Fiber str. (O gage).....	-.18	+45	+56	+12	+04	-.14	-.17	-.05	-.02	+27		+15
Uniformity ratio.....	-.04	+58	+58	+41	+44	-.09	+08	+41	+33	+64		+06
Beta Coefficients for:												
Grade index.....	-.57*	+05*	+02*	+05*	+07*	+39	+32*	-.62	-.56	+05*		+52*
Staple length.....	+27	+28	+28	+21*	+16*	-.22*	-.23*	+18*	+25*	+26		-.14*
Micronaire.....	-.22*	-.42	-.42	-.56	-.60	+87	+73	-.90	-.85	-.55		+.23*
Fiber str. (O gage).....	-.25*	+22	+27	+09*	+03*	-.11*	-.17*	-.05*	-.02*	+11*		+17*
Uniformity ratio.....	-.05*	+27	+24	+27*	+30*	-.06*	+07*	+38*	+30*	+27		+06*
Regression Equation:												
Constant (a).....	+22.90	-264.21	-146.83	-2.91	-.46	+54.82	+43.60	+35.54	+15.48	-161.73		+53.11
Regression Coef. for:												
Grade index.....	-.12	+18	+03	.00	+01	+1.16	+58	-1.58	-1.09	+14		+45
Staple length.....	+19	+4.54	+20	+10	+07	-3.09	-1.94	+2.19	+2.24	+3.14		-.58
Micronaire.....	-.54	-18.47	-8.99	-.70	-.68	+31.94	+16.16	-28.26	-20.31	-18.14		+5.01
Fiber str. (O gage).....	-.07	+1.07	+64	+01	.00	-.45	-.42	-.18	-.06	+39		+20
Uniformity ratio.....	-.04	+4.04	+1.80	+11	+12	-.80	+51	+4.22	+2.50	+3.11		-.12
Standard Error (\pm).....	1.06	6.24	2.75	.28	.27	9.43	7.24	10.30	7.71	4.09		6.03

*Statistically insignificant

Table 19.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 41 long staple samples, carded yarn, collected at triweekly intervals from selected gin points, crop of 1975

Statistical Items	Dependent Variables											
	Picker & card waste		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Color of 22s yarn	
	Pct.	Lbs.	Coarse 22s	Fine 50s	Pct.	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	No.	Coarse 22s	Dyed yarn
Mean Values for:												
Dependent variable.....	9.1	113	39	4.3	5.5	5.5	4.3	99	75	21	28	102
Grayness.....	2	2	2	2	2	2	2	2	2	2	2	2
Yellowness.....	3	3	3	3	3	3	3	3	3	3	3	3
Nonlint content (S.A.).....	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
2.5% span length.....	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
Micronaire.....	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Standard Deviation (±) for:												
Dependent variable.....	1.33	23.2	11.4	.66	.60	.60	.66	19.6	11.9	12.7	16.8	3.9
Grayness.....	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Yellowness.....	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6
Nonlint content (S.A.).....	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
2.5% span length.....	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Micronaire.....	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53
Simple Correlation Coef. for:												
Grayness.....	.41	.89	.89	-.89	-.87	-.87	-.89	.62	.54	-.48	-.43	-.59
Yellowness.....	.15	-.45	-.45	-.45	-.48	-.48	-.45	.33	.27	-.20	-.13	-.19
Nonlint content (S.A.).....	.77	-.28	-.28	-.16	-.18	-.18	-.16	-.21	-.10	.36	.38	-.25
2.5% span length.....	-.36	.88	.88	.78	.79	.79	.78	-.59	-.55	.55	.54	.45
Micronaire.....	.15	-.75	-.75	-.78	-.78	-.78	-.78	.83	.75	-.68	-.55	-.31
Multiple Cor. Data for:												
DEPENDENT VARIABLE with												
GRAYNESS, YELLOWNESS	.42	.89	.89	.89	.87	.87	.89	.62	.54	.49	.45	.62
Partial Cor. Coef. for:												
Grayness.....	.39	.86	.86	-.86	-.83	-.83	-.86	.56	.49	-.45	-.44	-.60
Yellowness.....	-.09	.08	.10	.08	-.01	-.01	.08	-.02	-.04	.08	.14	+.20
Beta Coefficients for:												
Grayness.....	.46*	-.91	-.92	-.91	-.87	-.87	-.91	.63	.56	-.53	-.51*	-.70
Yellowness.....	-.10*	.04*	.05*	.05*	-.01*	-.01*	.05*	-.02*	-.04*	.08*	.15*	+.19*
Regression Equation:												
Constant (a).....	+8.99	+135.00	+49.23	+4.91	+6.20	+6.20	+4.91	+84.27	9.95	+25.07	+26.44	+101.89
Regression Coef. for:												
Grayness.....	.41	-13.99	-6.94	-.40	-.34	-.34	-.40	+8.14	+4.40	-4.42	-5.71	-1.81
Yellowness.....	.23	+1.79	+1.10	.05	-.01	-.01	.05	-.60	-.76	+1.86	+4.51	+1.37
Standard Error (±).....	1.21	10.60	5.16	.30	.30	.30	.30	15.33	68.61	11.14	15.02	3.11
DEPENDENT VARIABLE with												
GRAYNESS, YELLOWNESS,												
NONLINT (S.A.)	.79	.89	.89	.90	.88	.88	.90	.77	.62	.75	.73	.62
Multiple Cor. Coef. for:												
Partial Cor. Coef. for:												
Grayness.....	.24	-.85	-.86	-.88	-.84	-.84	-.88	.71	.57	-.67	-.65	-.57
Yellowness.....	-.08	.08	.11	.11	.00	.00	.11	-.06	-.06	.14	.22	+.20
Nonlint (S.A.).....	.73	.07	.14	.35	.26	.26	.35	-.58	-.37	.65	.64	-.04
Beta Coefficients for:												
Grayness.....	.19*	-.93	-.95	-.98	-.92	-.92	-.98	.82	.69	-.76	-.75	-.69
Yellowness.....	-.06*	.05*	.06*	.05*	.00*	.00*	.05*	-.04*	-.05*	.12*	.18*	+.19*
Nonlint (S.A.).....	.71	.04*	.07*	.17*	.14*	.14*	.17*	-.49	-.33*	.61	.61	-.04*
Regression Equation:												
Constant (a).....	+6.13	+132.49	+46.88	+4.57	+5.96	+5.96	+4.57	+112.91	+80.32	+1.56	-.42	+102.31
Regression Coef. for:												
Grayness.....	.17	-14.20	-7.14	-.42	-.36	-.36	-.42	+10.52	.57	-.68	-.89	-1.78
Yellowness.....	-.14	+1.88	+1.18	.06	.00	.00	.06	-.15	-.15	.23	.22	+1.35
Nonlint (S.A.).....	.88	.77	.72	.10	.08	.08	.10	-8.82	-3.61	.74	.94	-.13
Standard Error (±).....	.82	10.57	5.11	.28	.29	.29	.28	12.49	9.27	8.43	11.55	3.11

*Statistically insignificant

Table 19.--Continued

Statistical Items	Dependent Variables													
	Picker & card waste		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential		Color of 22s yarn	
	Pct.	Lbs.	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Pct.	Index	Coarse 22s	Fine 50s	No.	Index	Gray yarn	Bleached yarn
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH														
Multiple Cor. Coef. ....	.81	.96			.91	.93	.78	.66	.78	.79	.95	.79	.17	.62
Partial Cor. Coef. for:														
Grayness.....	+02	-79	-80	-75	-70	-75	+50	+37	-29	-34	-75	-63	+05	-45
Yellowness.....	-10	+20	+24	+15	+04	+15	-08	-08	+26	+18	+20	+06	-03	+21
Nonlint (S.A.).....	+75	-01	+10	+35	+24	+35	-58	-35	+65	+66	+19	-25	-16	-05
2.5% span length.....	-29	+78	+79	+47	+51	+47	-27	-26	+41	+38	+71	-09	-04	+08
Beta Coefficients for:														
Grayness.....	+02*	-59	-59	-74	-66	-74	+62	+48*	-36*	-41*	-61	-79	+08*	-62
Yellowness.....	-07*	+07*	+08*	+07*	+02*	+07*	-06*	-07*	+20*	+13*	+08*	+04*	-03*	+20*
Nonlint (S.A.).....	+73	.00*	+03*	+15*	+11*	+15*	-47	-31*	+58	+58	+07*	-17*	-17*	-04*
2.5% span length.....	-25*	+50	+50	+29	+35	+29	-24*	-29*	+40*	+36*	+45	-08*	-05*	+09*
Regression Equation:														
Constant (a).....	+14.91	-173.60	-102.88	-39	+49	-39	+238.09	+171.63	-183.25	-119.02	-127.94	+110.47	+118.43	+92.65
Regression Coef. for:														
Grayness.....	+02	-9.00	-4.43	-32	-26	-32	+7.95	+3.74	-3.97	-3.48	-7.05	-2.97	+35	-1.62
Yellowness.....	-17	+2.94	+1.69	+08	+02	+08	-1.96	-1.46	+6.13	+3.04	+2.48	+42	-37	+1.39
Nonlint (S.A.).....	+90	-04	+32	+09	+06	+09	-8.49	-3.37	+9.07	+6.92	+1.09	-87	-12	-15
2.5% span length.....	-755	+263.05	+128.42	+4.23	+4.68	+4.23	-106.82	-78.32	+151.38	+102.16	+178.36	-10.06	-7.46	+8.31
Standard Error (+).....	.79	6.61	3.15	.25	.25	.25	12.03	8.93	10.53	7.79	5.59	3.44	6.35	3.10
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH, MICRONAIRE														
Multiple Cor. Coef. ....	.81	.96			.92	.93	.90	.80	.85	.85	.96	.80	.31	.67
Partial Cor. Coef. for:														
Grayness.....	+07	-61	-62	-59	-47	-59	-03	-15	+12	+06	-49	-55	-15	-53
Yellowness.....	-10	+21	+25	+15	+04	+15	-10	-09	+30	+21	+24	+06	-03	+22
Nonlint (S.A.).....	+72	-80	-01	+27	+13	+27	-50	-17	+59	+60	-02	-20	-06	+07
2.5% span length.....	-29	+80	+80	+48	+53	+48	-38	-34	+48	+45	+77	-09	+05	+32
Micronaire.....	-08	-30	-30	-22	-29	-22	+69	+60	-53	-52	-56	+10	+26	+08
Beta Coefficients for:														
Grayness.....	+09*	-46	-46	-62	-47	-62	-04*	-21*	+15*	+08*	-34	-88	-31*	-1.01
Yellowness.....	-07*	+07*	+08*	+07*	+02*	+07*	-05*	-06*	+20*	+13*	+08*	+04*	-03*	+20*
Nonlint (S.A.).....	+71	-04*	.00*	+12*	+06*	+12*	-29	-12*	+45	+45	-01*	-11*	-06*	+06*
2.5% span length.....	-25*	+51	+50	+29	+35	+29	-26*	-31*	+41	+37	+46	-08*	-06*	+08*
Micronaire.....	-08*	-15*	-14*	-14*	-21*	-14*	+73	+78	-57	-55	-31	+10*	+45*	+14*
Regression Equation:														
Constant (a).....	+15.56	-152.41	-92.68	+19	+1.28	+19	+148.40	+114.25	-123.41	-75.28	-94.27	+106.94	+100.40	+81.91
Regression Coef. for:														
Grayness.....	+08	-7.02	-3.47	-27	-19	-27	-46	-1.63	+1.66	+64	-3.90	-3.30	-1.33	-2.62
Yellowness.....	-17	+2.91	+1.68	+08	+02	+08	-1.86	-1.40	+6.07	+2.99	+2.44	+42	-35	+1.40
Nonlint (S.A.).....	+88	-78	-03	+07	+03	+07	-5.34	-1.35	+6.96	+5.38	-09	-74	-39	+22
2.5% span length.....	-750	+264.65	+129.19	+4.27	+4.74	+4.27	-113.59	-82.65	+155.90	+105.47	+180.90	-10.32	-8.82	+7.50
Micronaire.....	-20	-636	-306	-17	-24	-17	+26.93	+17.22	-17.98	-13.14	-10.11	+1.06	+5.41	+3.22
Standard Error (+).....	.79	6.31	3.00	.24	.24	.24	8.69	7.18	8.94	6.65	4.64	3.42	6.12	2.93

*Statistically insignificant

Table 20.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 41 long staple samples, carded yarn, collected at triweekly intervals from selected gin points, crop of 1975

Statistical Items	Dependent Variables																
	Picker & card waste	Yarn skein strength			Yarn elongation		Yarn appearance		Yarn imperfections			Spinning Potential	Color of 22s yarn				
		Coarse 22s	Fine 50s	Lbs.	Pct.	Coarse 22s	Fine 50s	Index	Coarse 22s	Fine 50s	No.		Index	Gray yarn	Bleached yarn	Dyed yarn	
Pct.	Lbs.	Fine 50s	Pct.	Coarse 22s	Fine 50s	Index	Coarse 22s	Fine 50s	No.	Index	Index	Index	Index	Index			
Mean Values for:																	
Dependent variable.....	9.1	113	39	4.3	5.5	75	99	1.12	1.12	21	28	69	91	106	102		
2.5% span length.....	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	
Micronaire.....	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	
Fiber str. (1/8" gage).....	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
Uniformity ratio.....	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
Elongation (1/8" gage).....	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	
Standard Deviation (±) for:																	
Dependent variable.....	1.33	23.2	11.4	.66	.60	11.9	19.6	.66	.04	12.7	16.8	17.6	5.7	6.4	3.9		
2.5% span length.....	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	
Micronaire.....	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	
Fiber str. (1/8" gage).....	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	
Uniformity ratio.....	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	
Elongation (1/8" gage).....	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	
Simple Correlation Coef. for:																	
2.5% span length.....	-.36	.88	.88	.78	.79	-.55	-.59	.78	-.59	-.55	.54	.55	.50	-.06	.45		
Micronaire.....	.15	-.75	-.76	-.78	-.78	.75	.83	-.78	.83	.75	-.65	-.68	-.54	.22	-.31		
Fiber str. (1/8" gage).....	-.46	.81	.84	+.81	+.77	-.56	-.58	+.50	-.58	-.56	.52	.55	.37	-.11	.38		
Uniformity ratio.....	-.36	+.60	+.59	+.50	+.50	-.04	-.11	+.50	-.11	-.04	.21	.21	.21	-.10	.35		
Elongation (1/8" gage).....	+.22	-.32	-.31	-.17	-.15	+.22	.11	-.17	.11	+.22	-.03	-.09	.04	.49	.11		
Multiple Cor. Data for:																	
DEPENDENT VARIABLE WITH																	
2.5% SPAN LENGTH, MICRONAIRE																	
Multiple Cor. Coef. for:	.37	.93	.94	.88	.89	.77	.84	.88	.84	.77	.68	.71	.59	.23	.46		
Partial Cor. Coef. for:																	
2.5% span length.....	-.34	.84	.84	.66	.69	-.24	-.27	.66	-.27	-.24	.28	.28	.28	.07	.36		
Micronaire.....	-.07	-.65	-.67	-.66	-.66	+.64	+.75	-.66	+.75	+.64	-.50	-.54	-.37	.22	-.07		
Beta Coefficients for:																	
2.5% span length.....	-.41	.67	.66	.50	.52	-.19*	-.18*	.50	-.18*	-.19*	.25*	.25*	.28*	.08*	.41*		
Micronaire.....	-.08*	-.37	-.38	-.50	-.48	+.64	+.73	-.50	+.73	+.64	-.51	-.54	-.49	.26*	-.08*		
Regression Equation:																	
Constant (a).....	+23.76	-217.15	-121.61	-1.71	-.36	+76.88	+86.71	-1.71	+86.71	+76.88	-18.65	-8.97	-126.46	+80.58	+63.44		
Regression Coef. for:																	
2.5% span length.....	-12.29	+348.29	+170.30	+7.39	+7.07	-50.00	-79.88	+7.39	-79.88	-50.00	+95.41	+71.06	+228.74	+12.02	+36.33		
Micronaire.....	-.21	-16.31	-8.23	-.61	-.55	+14.32	+26.72	-.61	+26.72	+14.32	-16.07	-13.00	-16.13	+3.17	-.59		
Standard Error (±).....	1.24	8.45	4.05	.31	.28	7.62	10.47	.31	10.47	7.62	12.27	8.93	5.68	6.27	3.50		
DEPENDENT VARIABLE WITH																	
2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE)																	
Multiple Cor. Coef. for:	.48	.94	.95	.91	.90	.77	.85	.91	.85	.77	.69	.72	.96	.23	.46		
Partial Cor. Coef. for:																	
2.5% span length.....	-.05	.69	.69	.36	.45	-.08	-.14	.36	-.14	-.08	.16	.14	.67	.08	.26		
Micronaire.....	-.16	-.62	-.66	-.64	-.63	+.61	.73	-.64	.73	+.61	-.48	-.52	-.78	.20	-.07		
Fiber str. (1/8" gage).....	-.34	+.40	+.52	+.49	+.36	-.15	-.10	+.49	-.10	-.15	.09	.12	.44	-.04	.03		
Beta Coefficients for:																	
2.5% span length.....	-.08*	.51	.47	.25*	.35	-.08*	-.12*	.25*	-.12*	-.08*	.19*	.16*	.43	.02*	.38*		
Micronaire.....	-.18*	-.33	.33	-.43	-.44	+.62	.71	-.43	.71	+.62	-.49	-.52	-.45	.25*	-.07*		
Fiber str. (1/8" gage).....	-.50*	+.23*	+.30	+.37	+.26*	-.09*	-.09*	+.37	-.09*	-.16*	.10*	.13*	+.23*	.46*	+.04*		
Regression Equation:																	
Constant (a).....	+20.85	-193.81	-106.80	-.65	+.33	+68.81	+79.34	-.65	+79.34	+68.81	-11.32	-1.80	-109.06	+78.14	+64.18		
Regression Coef. for:																	
2.5% span length.....	-.29	+267.89	+119.30	+3.75	+.70	-22.20	-54.49	+3.75	-54.49	-22.20	+70.16	+46.34	+168.81	+18.00	+33.79		
Micronaire.....	-.44	-14.44	-7.04	-.53	-.49	+13.67	+26.13	-.53	+26.13	+13.67	-15.49	-12.43	-14.73	+3.03	-.53		
Fiber str. (1/8" gage).....	-.31	+2.49	+1.58	+.11	+.07	-.86	-.79	+.11	-.79	-.86	+.78	+.76	+1.85	+1.20	+.08		
Standard Error (±).....	1.17	7.76	3.45	.27	.26	7.53	10.42	.27	10.42	7.53	12.23	8.87	5.10	4.29	3.50		
*Statistically insignificant																	

*Statistically insignificant

Table 20.--Continued

Statistical Items	Dependent Variables																		
	Picker & card waste	Yarn skein strength				Yarn elongation				Yarn appearance				Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s		Fine 50s		Coarse 22s		Fine 50s		Coarse 22s		Fine 50s		No.	Index		Gray yarn	Bleached yarn	Dyed yarn
		Lbs.	Pct.	Lbs.	Pct.	Index	Index	No.	No.	Index	Index	No.	Index						
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO																			
Multiple Cor. Coef.....	.49		.96		.92	.85	.80	.72	.69		.67		.29	.47					
Partial Cor. Coef. for:																			
2.5% span length.....																			
Micronaire.....	+.02	+.54	+.55	+.15	+.23	-.25	-.31	+.13	+.12	+.13	+.14	+.11	+.18	+.11					
Fiber str. (1/8" gage)....	-.10	-.74	-.75	-.68	-.68	+.66	+.49	-.46	-.43	-.46	-.35	-.35	+.26	-.12					
Uniformity ratio.....	-.31	+.31	+.47	+.43	+.29	-.16	-.25	+.12	+.09	+.36	+.30	+.01	+.00	+.00					
Beta Coefficients for:	-.09	+.50	+.48	+.32	+.31	+.22	+.35	-.03	-.01	+.57	+.20	+.20	-.18	+.12					
2.5% span length.....	+.03*	+.35	+.33	+.11*	+.19*	-.31*	-.45*	+.20*	+.20*	+.20*	-.22*	-.22*	+.39*	+.21*					
Micronaire.....	-.13*	-.44	-.42	-.51	-.52	+.64	+.47	-.51	-.49	-.51	-.39*	-.39*	+.36*	-.14*					
Fiber Str. (1/8" gage)....	-.47*	+.16*	+.23	+.31*	+.20*	-.14*	-.26*	+.14*	+.10*	+.15*	+.39*	+.39*	+.01*	-.01*					
Uniformity ratio.....	-.11*	+.25	+.21	+.20*	+.20*	+.17*	+.33*	-.03*	-.01*	+.24	+.22*	+.22*	-.25*	+.16*					
Regression Equation:																			
Constant (a).....	+20.52	-221.47	-120.46	-1.13	+0.09	+96.21	+92.71	-3.71	-12.23	-132.97	+79.45	+71.74	+66.94						
Regression Coef. for:																			
2.5% span length.....	+.92	+180.87	+83.92	+1.66	+2.60	-134.23	-119.64	+56.59	+75.01	+106.50	-28.43	+55.84	+18.96						
Micronaire.....	-.32	-19.16	-9.05	-.63	-.59	+23.40	+10.45	-12.06	-15.31	-18.27	-4.19	+4.37	-1.06						
Fiber str. (1/8" gage)....	-.29	+1.69	+1.24	+.09	+.06	-1.25	-1.41	+.83	+.81	+.26	+1.03	+0.04	-.01						
Uniformity ratio.....	-.10	+3.74	+1.59	+.08	+.08	+2.17	+2.55	-.29	-.14	+2.80	+1.06	-.1.06	+.41						
Standard Error (+).....	1.16	6.71	3.02	.26	.24	10.17	7.05	8.86	12.23	4.18	4.20	6.17	3.47						
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO, ELONGATION (1/8" GAGE)																			
Multiple Cor. Coef.....	.49		.96		.93	.86	.81	.72	.70		.71		.57						
Partial Cor. Coef. for:																			
2.5% span length.....	+.03	+.51	+.53	+.23	+.32	-.28	-.28	+.16	+.18	+.47	-.04	+.42	+.22						
Micronaire.....	-.09	-.73	-.74	-.66	-.65	+.64	+.50	-.43	-.39	-.86	-.30	+.46	-.03						
Fiber str. (1/8" gage)....	-.30	+.30	+.47	+.46	+.33	-.17	-.24	+.13	+.11	+.35	+.34	+.10	+.04						
Uniformity ratio.....	-.09	+.50	+.48	+.30	+.29	+.23	+.34	-.05	-.04	+.58	+.16	-.31	+.08						
Elongation (1/8" gage)....	+.06	-.04	.00	+.27	+.30	-.12	+.09	+.12	+.20	-.14	+.30	+.62	+.36						
Beta Coefficients for:																			
2.5% span length.....	+.06*	+.34	+.33	+.18*	+.27*	-.35*	-.41*	+.26*	+.31*	+.25	-.07*	+.82*	+.44*						
Micronaire.....	-.11*	-.44	-.42	-.48	-.48	+.62*	+.49	-.48	-.43*	-.57	+.57	+.57	-.03*						
Fiber str. (1/8" gage)....	-.46*	+.16*	+.23	+.33	+.23*	-.15*	-.25*	+.16*	+.13*	+.15*	+.44*	+.13*	+.06*						
Uniformity ratio.....	-.12*	+.25	+.21	+.18*	+.17*	+.18*	+.32*	-.05*	+.25	+.25	+.18*	+.37*	+.10*						
Elongation (1/8" gage)....	+.05*	-.01*	.00*	+.12*	+.14*	-.07*	+.06*	+.09*	+.17*	-.04*	+.25*	+.67	+.36*						
Regression Equation:																			
Constant (a).....	+18.58	-214.59	-120.61	-3.12	-2.08	+133.44	+74.00	-35.55	-88.62	-116.38	+41.51	-45.90	+28.73						
Regression Coef. for:																			
2.5% span length.....	+1.93	+177.41	+83.99	+2.66	+3.71	-153.88	-109.72	+73.35	+115.21	+98.18	-8.77	+117.75	+39.07						
Micronaire.....	-.28	-19.31	-9.04	-.59	-.54	+22.61	+10.84	-11.39	-13.70	-18.64	-3.37	+6.85	-.25						
Fiber str. (1/8" gage)....	-.28	+1.67	+1.24	+.10	+.06	-1.36	-1.35	+.92	+1.20	+.27	+.39	+.10	+.10						
Uniformity ratio.....	-.11	+3.76	+1.59	+.08	+.07	+2.32	+2.48	-.45	-.45	+2.87	-.65	-1.54	+.26						
Elongation (1/8" gage)....	+.14	-.53	+.01	+.15	+.16	-2.66	+1.33	+2.29	+5.49	-1.27	+2.79	+8.45	+2.75						
Standard Error (+).....	1.16	6.71	3.02	.25	.23	10.10	7.02	8.80	11.97	4.14	4.01	4.84	3.24						

*Statistically insignificant

Table 21.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 41 long staple samples, combed yarn, collected at triweekly intervals from selected gin points, crop of 1975

Statistical Items	Dependent Variables											
	Comber waste		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections			
	Pct.	Lbs.	22s or 27 tex	50s or 12 tex	Pct.	Pct.	Index	Index	22s or 27 tex	50s or 12 tex	No.	No.
Mean Values for:												
Dependent variable.....	17.6	135			6.1	4.9	109	89	14.9	11.3		
Grade index.....	92	92			92	92	92	92	92	92		
Staple length.....	35.4	35.4			35.4	35.4	35.4	35.4	35.4	35.4		
Micronaire.....	3.8	3.8			3.8	3.8	3.8	3.8	3.8	3.8		
Fiber strength (0 gage).....	89	89			89	89	89	89	89	89		
Uniformity ratio.....	44	44			44	44	44	44	44	44		
Standard Deviation (±) for:												
Dependent variable.....	1.83	20.9			.5	.5	16.6	14.6	10.9	8.8		
Grade index.....	6.6	6.6			6.6	6.6	6.6	6.6	6.6	6.6		
Staple length.....	1.39	1.39			1.39	1.39	1.39	1.39	1.39	1.39		
Micronaire.....	.53	.53			.53	.53	.53	.53	.53	.53		
Fiber strength (0 gage).....	4.8	4.8			4.8	4.8	4.8	4.8	4.8	4.8		
Uniformity ratio.....	1.5	1.5			1.5	1.5	1.5	1.5	1.5	1.5		
Simple Correlation Coef. for												
Grade index.....	-.66	.76			.41	.64	-.32	-.34	.18	.18		
Staple length.....	-.74	.83			.47	.64	-.46	-.39	.35	.37		
Micronaire.....	+.35	-.77			-.68	-.80	-.69	-.69	-.69	-.69		
Fiber strength (0 gage).....	-.65	.83			.45	.64	-.33	-.40	.22	.20		
Uniformity ratio.....	-.77	.57			.23	.42	.00	-.03	.04	.06		
Multiple Cor. Data for:												
DEPENDENT VARIABLE with												
GRADE INDEX, STAPLE LENGTH												
Multiple Cor. Coef.....	.77	.88			.49	.70	.46	.41	.35	.38		
Partial Cor. Coef. for:												
Grade index.....	-.34	.51			.15	.39	-.30	-.12	.06	.09		
Staple length.....	-.54	.58			.30	.38	-.35	-.24	.31	.34		
Beta Coefficients for:												
Grade index.....	-.31*	.42			.17*	.39*	-.03*	-.14*	-.07*	-.11*		
Staple length.....	-.54	.51			.36*	.38*	-.44*	-.30*	.40*	.44*		
Regression Equation:												
Constant (a).....	+50.42	-285.64			.05	-2.83	+303.36	+228.14	-83.54	-74.31		
Regression Coef. for:												
Grade index.....	-.08	.67			.01	.03	-.09	-.32	-.12	-.15		
Staple length.....	-.71	+3.80			.13	.14	-5.26	-3.12	+3.10	+2.81		
Standard Error (±).....	1.16	5.65			.46	.36	14.75	13.33	10.15	8.16		
DEPENDENT VARIABLE with												
GRADE INDEX, STAPLE LENGTH,												
MICRONAIRE												
Multiple Cor. Coef.....	.79	.90			.69	.84	.83	.79	.74	.75		
Partial Cor. Coef. for:												
Grade index.....	-.41	.41			.05	.24	.33	.19	.36	.40		
Staple length.....	-.58	.52			.15	.24	-.18	.00	.12	.17		
Micronaire.....	-.26	-.56			.56	.65	.77	.74	.69	.70		
Beta Coefficients for:												
Grade index.....	-.38*	.28*			.05*	.18*	.28*	.16*	-.37*	-.40*		
Staple length.....	-.61	.37			.15*	.19*	-.14*	.00*	.12*	.16*		
Micronaire.....	-.21*	-.40			.63	.60	.88	.87	-.83	-.83		
Regression Equation:												
Constant (a).....	+58.34	-60.07			.61	.39	+1.18	-33.46	+102.85	+76.53		
Regression Coef. for:												
Grade index.....	-.11	.44			.00	.01	.70	.36	.61	.54		
Staple length.....	-.80	+2.79			.06	.07	-1.70	-.03	.90	.103		
Micronaire.....	-.72	-7.77			.61	.56	+27.41	+23.73	-16.91	-13.68		
Standard Error (±).....	1.12	4.63			.38	.27	9.37	8.97	7.33	5.86		

*Statistically insignificant

Table 21.--Continued

Statistical Items	Dependent Variables									
	Comber waste		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
	Pct.	Lbs.	22s or 27 tex	50s or 12 tex	Pct.	Pct.	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)										
Multiple Cor. Coef. ....	.80	.94			.69	.85	.83	.79	.74	.75
Partial Cor. Coef. for										
Grade index.....	-.30	+.20			-.09	+.13	+.23	+.23	-.28	-.28
Staple length.....	-.51	+.54			+.09	+.14	-.21	+.06	+.15	+.22
Micronaire.....	-.27	-.61			-.55	-.65	+.78	+.74	-.69	-.70
Fiber str. (0 gage).....	-.16	+.56			+.11	+.21	+.11	-.15	-.09	-.15
Beta Coefficients for:										
Grade index.....	-.30*	+.11*			-.10*	+.11*	+.22*	+.22*	-.32*	-.31*
Staple length.....	-.55	+.32			+.10*	+.11*	+.16*	+.02*	+.15*	+.22*
Micronaire.....	-.22*	-.33			-.62	-.59	+.89	+.86	-.84	-.84
Fiber str. (0 gage).....	-.15*	+.36			+.13*	+.18*	+.10*	-.15*	-.10*	-.15*
Regression Equation:										
Constant (a).....	+.58.81	-157.06			+.61	+.3.12	-.98	-.26.39	+.104.36	+.77.66
Regression Coef. for:										
Grade index.....	-.08	+.34			-.01	+.01	+.56	+.48	-.52	-.42
Staple length.....	-.72	+.87			+.04	+.04	-.21	+.57	+.1.21	+.1.41
Micronaire.....	-.75	-12.79			-.61	-.55	+.27.60	+.23.50	-.17.03	-13.83
Fiber str. (0 gage).....	-.06	+.1.54			+.01	+.02	+.35	-.44	-.22	-.28
Standard Error (±).....	1.10	6.88			.38	.27	9.31	8.87	7.30	5.80
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (0 GAGE), UNIFORMITY RATIO										
Multiple Cor. Coef. ....	.87	.96			.71	.88	.83	.79	.75	.77
Partial Cor. Coef. for:										
Grade index.....	-.18	+.06			-.15	+.01	+.23	+.23	-.32	-.33
Staple length.....	-.41	+.45			+.02	-.01	-.20	+.07	+.07	+.13
Micronaire.....	+.01	-.72			-.57	-.71	+.74	-.72	-.70	-.72
Fiber str. (0 gage).....	-.02	+.53			+.07	+.12	+.11	-.13	-.14	-.21
Uniformity ratio.....	-.57	+.50			+.19	+.41	.00	-.04	+.21	+.26
Beta Coefficients for:										
Grade index.....	-.15*	+.03*			-.17*	+.01*	+.22*	+.23*	-.37*	-.33*
Staple length.....	-.36*	+.24			+.02*	-.01*	-.18*	+.07*	+.08*	+.13*
Micronaire.....	+.01*	-.43			-.71	-.73	+.89	+.88	-.93	-.95
Fiber str (0 gage).....	-.02*	+.29			+.08*	+.10*	+.10*	-.14*	-.15*	-.22*
Uniformity ratio.....	-.49	+.23			+.20*	+.30*	.00*	-.03*	+.20*	+.24*
Regression Equation:										
Constant (a).....	+.63.87	-182.62			+.67	+.2.31	-.98	-.23.83	+.92.18	+.65.36
Regression Coef. for:										
Grade index.....	-.04	+.09			-.01	.00	+.56	+.51	-.62	-.51
Staple length.....	-.47	+.53			+.01	.00	-.21	+.71	+.62	+.83
Micronaire.....	+.03	-16.98			-.70	-.69	+.27.60	+.23.93	-.18.88	-15.65
Fiber str. (0 gage).....	-.01	+.1.27			+.01	+.01	+.35	-.41	-.35	-.40
Uniformity ratio.....	-.58	+.3.12			+.07	+.10	.00	-.32	+.1.38	+.1.36
Standard Error (±).....	.90	5.98			.37	.24	9.31	8.87	7.14	5.61

*Statistically insignificant

Table 22.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 41 long staple samples, combed yarn, collected at triweekly intervals from selected gin points, crop of 1975

Statistical Items	Dependent Variables									
	Comber waste		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	Index	No.	No.
Mean Values for:										
Dependent variable.....	17.6	135	50	6.1	4.9	109	89	14.9	11.3	
Grayness.....	2	2	2	2	2	2	2	2	2	
Yellowness.....	3	3	3	3	3	3	3	3	3	
Nonlint content (S.A.).....	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
2.5% span length.....	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	
Micronaire.....	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	
Standard Deviation (\pm) for:										
Dependent variable.....	1.83	20.9	10.5	.5	.5	16.6	14.6	10.9	8.8	
Grayness.....	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Yellowness.....	.6	.6	.6	.6	.6	.6	.6	.6	.6	
Nonlint content (S.A.).....	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
2.5% span length.....	.04	.04	.04	.04	.04	.04	.04	.04	.04	
Micronaire.....	.53	.53	.53	.53	.53	.53	.53	.53	.53	
Simple Correlation Coef. for:										
Grayness.....	.61	.88	.87	-.62	-.83	.55	.52	-.44	-.44	
Yellowness.....	.42	-.42	-.47	-.27	-.49	.41	.34	-.27	-.27	
Nonlint (S.A.).....	.28	-.28	-.30	-.11	-.16	.15	.08	.24	.31	
2.5% span length.....	-.74	.87	.82	.57	.68	.53	.47	.42	.43	
Micronaire.....	.35	-.76	-.77	-.68	-.80	.80	.78	-.69	-.69	
Multiple Cor. Data for:										
DEPENDENT VARIABLE with										
GRAYNESS, YELLOWNESS										
Multiple Cor. Coef. ....	.63	.88	.87	.62	.84	.57	.52	.44	.44	
Partial Cor. Coef. for:										
Grayness.....	.61	-.86	-.83	-.58	-.78	.43	.42	-.35	-.36	
Yellowness.....	-.19	.16	.00	.10	-.08	.15	.09	-.05	-.04	
Beta Coefficients for:										
Grayness.....	.71	-.93	-.87	-.67	-.80	.47*	.47*	-.41*	-.41	
Yellowness.....	-.18*	.09*	.00*	.10*	-.06*	.15*	.09*	-.05*	-.04*	
Regression Equation:										
Constant (a).....	+17.57	+150.56	+61.56	+6.29	+5.52	+87.06	+73.34	+23.40	+17.93	
Regression Coef. for:										
Grayness.....	.85	-12.79	-5.99	-.23	-.27	.18	.50	-2.90	-2.41	
Yellowness.....	-.60	+3.31	.01	.09	-.05	.47	.37	-1.07	-.71	
Standard Error (\pm).....	1.42	9.87	5.20	.41	.28	13.70	12.44	9.76	7.93	
DEPENDENT VARIABLE with										
GRAYNESS, YELLOWNESS										
NONLINT (S.A.)										
Multiple Cor. Coef. ....	.66	.88	.87	.63	.85	.67	.59	.61	.66	
Partial Cor. Coef. for:										
Grayness.....	.55	-.85	-.81	-.59	-.79	.55	.49	-.50	-.54	
Yellowness.....	-.19	.16	.00	.11	-.08	.14	.08	-.03	-.02	
Nonlint (S.A.).....	.27	.07	.02	.15	.24	-.44	-.32	.48	.55	
Beta Coefficients for:										
Grayness.....	.62	-.94	-.87	-.72	-.86	.62	.58	-.58	-.61	
Yellowness.....	-.17*	.09*	.00*	.11*	-.05*	.13*	.07*	-.03*	-.02*	
Nonlint (S.A.).....	.23*	.04*	.01*	.13*	.14*	-.39*	-.29*	.46	.52	
Regression Equation:										
Constant (a).....	+16.32	+148.21	+61.25	+6.08	+5.30	+106.53	+86.18	+8.33	+3.98	
Regression Coef. for:										
Grayness.....	.75	-12.99	-6.01	-.25	-.29	.80	.57	-.45	-3.57	
Yellowness.....	-.56	+3.39	.02	.10	-.04	.83	.95	-.58	-.25	
Nonlint (S.A.).....	.38	.72	.10	.06	.07	-6.00	-3.95	+4.64	+4.30	
Standard Error (\pm).....	1.37	9.85	5.19	.41	.27	12.30	11.79	8.57	6.64	

*Statistically insignificant

Table 22.--Continued

Statistical Items	Dependent Variables									
	Comber waste		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
	Pct.	Lbs.	22s or 27 tex	50s or 12 tex	Pct.	22s or 27 tex	50s or 12 tex	Pct.	22s or 27 tex	50s or 12 tex
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH										
Multiple Cor. Coef.....	.82	.95		.92	.66	.85	.69	.60	.62	.67
Partial Cor. Coef. for:										
Grayness.....	+20	-.78		-.69	-.42	-.68	+37	+35	-.36	-.38
Yellowness.....	-.29	+30		+05	+13	-.06	+13	+07	-.02	-.01
Nonlint (S.A.).....	-.64	.00		-.05	+13	+23	-.43	-.31	+47	+54
2.5% span length.....		+76		+60	+23	+21	-.21	-.14	+14	+16
Beta Coefficients for:										
Grayness.....	+18*	-.60		-.60	-.55*	-.75	+46*	+50*	-.47*	-.49*
Yellowness.....	-.21*	+12*		+02*	+12*	-.04*	+12*	+07*	-.02*	-.01*
Nonlint (S.A.).....	+28*	.00*		-.02*	+11*	+13*	-.38*	-.28*	+45	+51
2.5% span length.....	-.68	+51		+42	+26*	+16*	-.22*	-.16*	+15*	+16*
Regression Equation:										
Constant (a).....	+48.84	-129.04		-53.78	+2.56	+3.18	+201.94	+148.50	-35.41	-35.18
Regression Coef. for:										
Grayness.....	+22	-8.28		-4.12	-.19	-.25	+5.10	+4.52	-3.40	-2.87
Yellowness.....	-.68	+4.35		+4.2	+11	-.04	+3.50	+1.74	-.42	-.12
Nonlint (S.A.).....	+47	-.01		-.21	+05	+06	-.574	-3.79	+4.52	+4.19
2.5% span length.....	-27.99	+238.28		+98.96	+3.03	+1.83	-81.85	-33.59	+37.57	+33.59
Standard Error (\pm).....	1.05	6.42		4.17	.39	.26	12.03	11.66	8.49	6.96
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH, MICRONAIRE										
Multiple Cor. Coef.....	.83	.96		.93	.72	.88	.85	.81	.76	.79
Partial Cor. Coef. for:										
Grayness.....	+28	-.56		-.41	-.06	-.38	-.25	-.27	+13	+10
Yellowness.....	-.29	+32		+05	+14	-.07	+19	+10	-.03	-.01
Nonlint (S.A.).....	+33	-.14		-.20	-.02	+09	-.27	-.09	+34	+44
2.5% span length.....	-.65	+78		+63	+26	+24	-.30	-.21	+18	+21
Micronaire.....	-.20	-.37		-.39	-.40	-.40	+69	+68	-.56	-.56
Beta Coefficients for:										
Grayness.....	+36*	-.42		-.36*	-.09*	-.44*	-.30*	-.36*	+19*	+14*
Yellowness.....	-.21*	+12*		+02*	+12*	-.04*	+12*	+07*	-.02*	-.01*
Nonlint (S.A.).....	+23*	-.05*		-.08*	-.01*	+05*	-.17*	-.06*	+27*	+34*
2.5% span length.....	-.68	+51		+43	+27*	+17*	-.24*	-.18*	+17*	+18*
Micronaire.....	-.20*	-.20*		-.27*	-.52*	-.36*	+86	+93	-.75	-.71
Regression Equation:										
Constant (a).....	+51.15	-103.18		-36.43	+4.27	+4.31	+112.24	+63.42	+15.53	+4.13
Regression Coef. for:										
Grayness.....	+44	-5.87		-2.50	-.03	-.15	-3.29	-3.43	+1.36	+81
Yellowness.....	-.68	+4.32		+40	+11	-.04	+3.61	+1.83	-.48	-.16
Nonlint (S.A.).....	+39	-.92		-.82	-.01	+02	-2.59	-.80	+2.74	+2.81
2.5% span length.....	-27.82	+240.23		+100.27	+3.15	+1.91	-88.62	-60.01	+41.42	+36.56
Micronaire.....	-.69	-7.76		-5.21	-.51	-.34	+26.92	+25.53	-15.29	-11.79
Standard Error (\pm).....	1.03	5.95		3.84	.36	.24	8.68	8.59	7.05	5.45

*Statistically insignificant

Table 23.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 41 long staple samples, combed yarn, collected at triweekly intervals from selected gin points, crop of 1975

Statistical Items	Dependent Variables									
	Comber waste		Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
	Pct.	Lbs.	22s or 27 tex	50s or 12 tex	Pct.	22s or 27 tex	50s or 12 tex	Index	22s or 27 tex	50s or 12 tex
Mean Values for:										
Dependent variable.....	17.6	135								
2.5% span length.....	1.12	1.12	6.1	4.9	109	89	14.9	11.3		
Micronaire.....	3.8	3.8	1.12	1.12	1.12	1.12	1.12	1.12		
Fiber str. (1/8" gage).....	24	24	3.8	3.8	3.8	3.8	3.8	3.8		
Uniformity ratio.....	44	44	24	24	24	24	24	24		
Elongation (1/8" gage).....	6.1	6.1	44	44	44	44	44	44		
Standard Deviation (±) for:										
Dependent variable.....	1.83	20.9	6.1	6.1	6.1	6.1	6.1	6.1		
2.5% span length.....	.04	.04	.5	.5	16.6	14.6	10.9	8.8		
Micronaire.....	.53	.53	.04	.04	.04	.04	.04	.04		
Fiber str. (1/8" gage).....	2.2	2.2	.53	.53	.53	.53	.53	.53		
Uniformity ratio.....	1.5	1.5	2.2	2.2	2.2	2.2	2.2	2.2		
Elongation (1/8" gage).....	.51	.51	1.5	1.5	1.5	1.5	1.5	1.5		
Simple Correlation Coef. for:										
2.5% span length.....	-.74	.87	.51	.51	.51	.51	.51	.51		
Micronaire.....	+.35	+.82	+.57	+.68	+.53	+.47	+.42	+.43		
Fiber str. (1/8" gage).....	-.65	-.76	-.68	-.80	+.80	+.78	+.69	+.69		
Uniformity ratio.....	-.77	+.56	+.23	+.73	+.53	+.47	+.05	+.07		
Elongation (1/8" gage).....	+.29	-.30	-.12	+.42	+.00	+.03	+.04	+.06		
Multiple Cor. Data for:										
DEPENDENT VARIABLE with										
2.5% SPAN LENGTH, MICRONAIRE										
Multiple Cor. Coef.....	.75	.93	.72	.85	.81	.78	.69	.69		
Partial Cor. Coef. for:										
2.5% span length.....	-.71	.83	.31	.47	.16	.06	+.05	+.07		
Micronaire.....	-.11	-.66	-.53	-.70	+.72	+.70	+.60	+.60		
Beta Coefficients for:										
2.5% span length.....	-.80	.65	+.27*	+.34	-.12*	-.05*	+.04*	+.06*		
Micronaire.....	-.09*	-.39	-.53	-.61	+.74	+.75	+.66	+.65		
Regression Equation:										
Constant (a).....	+55.46	-149.66	+.450	+.279	+.71.77	+.28.33	+.53.51	+.38.33		
Regression Coef. for:										
2.5% span length.....	-32.60	+304.95	+.3.17	+.3.81	-.44.26	-.15.85	+.11.11	+.12.54		
Micronaire.....	-.31	-15.46	-.52	-.58	+.22.94	+.20.51	-.13.44	-.10.81		
Standard Error (±).....	1.21	7.71	.36	.27	9.80	9.15	7.88	6.38		
DEPENDENT VARIABLE with										
2.5% SPAN LENGTH, MICRONAIRE,										
FIBER STR. (1/8" GAGE)										
Multiple Cor. Coef.....	.76	.95	.72	.87	.81	.79	.70	.70		
Partial Cor. Coef. for:										
2.5% span length.....	-.52	.66	+.20	+.15	-.07	+.09	+.05	+.02		
Micronaire.....	-.17	-.65	-.51	-.68	+.70	+.68	+.58	+.58		
Fiber str. (1/8" gage).....	-.23	+.48	+.05	+.38	-.08	-.20	+.14	+.11		
Beta Coefficients for:										
2.5% span length.....	-.63	.46	+.23*	+.12*	-.07*	+.09*	+.06*	+.02*		
Micronaire.....	-.14*	-.34	-.52	-.55	+.72	+.71	+.63	+.63		
Fiber str. (1/8" gage).....	-.24*	+.28	+.06*	+.33*	-.08*	-.20*	+.16*	+.13*		
Regression Equation:										
Constant (a).....	+53.53	-123.85	+.4.63	+.3.50	+.66.17	+.15.66	+.61.24	+.43.21		
Regression Coef. for:										
2.5% span length.....	-25.97	+216.03	+.2.71	+.1.36	-.24.96	+.27.83	-.15.54	-.15.27		
Micronaire.....	-.47	-13.38	-.51	-.53	+.22.49	+.19.49	-.12.82	-.10.41		
Fiber str. (1/8" gage).....	-.21	+.67	+.01	+.08	-.60	-.35	+.82	+.52		
Standard Error (±).....	1.18	6.76	.36	.25	9.77	8.97	7.80	6.34		

*Statistically insignificant

Table 23.--Continued

Statistical Items	Dependent Variables									
	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		No.	No.
	Pct.	Lbs.	Pct.	Pct.	Index	Index	22s or 27 tex	50s or 12 tex		
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO										
Multiple Cor. Coef. ....	.84	.96	.72	.89	.84	.80	.70	.70		
Partial Cor. Coef. for:										
2.5% span length.	-.19	+.51	+.15	-.08	-.32	-.10	+.07	+.07		
Micronaire.	+.13	-.72	-.47	-.72	+.61	+.60	-.49	-.50		
Fiber str. (1/8" gage).	-.09	+.42	+.05	+.31	+.19	+.25	+.14	+.14		
Uniformity ratio.	-.56	+.40	.00	+.34	+.37	+.22	-.15	-.12		
Beta Coefficients for:										
2.5% span length.	-.20*	+.33	+.23*	-.07*	-.42*	-.14*	+.11*	+.11*		
Micronaire.	+.10*	-.43	-.52	-.66	+.58	+.63	-.56	-.57		
Fiber str. (1/8" gage).	-.08*	+.23*	+.06*	+.25*	-.18*	-.26*	+.21*	+.17*		
Uniformity ratio.	-.53	+.19*	.00*	+.24*	+.32*	+.20*	-.16*	-.13*		
Regression Equation:										
Constant (a).	+.55-.05	-144.26	+.462	+.330	+.96.03	+.33.47	+.52.16	+.37.65		
Regression Coef. for:										
2.5% span length.	-.840	+.156.25	+.275	-.84	-155.90	-44.92	+.25.87	+.22.32		
Micronaire.	+.33	-16.68	-.51	-.63	+.18.08	+.17.08	-11.41	-9.50		
Fiber str. (1/8" gage).	-.07	+.219	+.01	+.06	-1.35	-1.76	+.106	+.68		
Uniformity ratio.	-.63	+.261	.00	+.08	+.350	+.91	-1.12	-.73		
Standard Error (\pm). ....	.98	6.19	.36	.23	9.06	8.75	7.71	6.30		
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATION, ELONGATION (1/8" GAGE)										
Multiple Cor. Coef. ....	.84	.96	.72	.89	.84	.80	.72	.72		
Partial Cor. Coef. for:										
2.5% span length.	-.18	+.48	+.17	-.03	-.34	-.12	+.12	+.12		
Micronaire.	+.12	-.71	-.45	-.70	+.58	+.57	-.46	-.46		
Fiber str. (1/8" gage).	-.09	+.41	+.06	+.33	+.20	-.26	+.20	+.16		
Uniformity ratio.	-.56	+.41	-.01	+.32	+.39	+.23	-.17	-.14		
Elongation (1/8" gage).	-.01	-.07	+.08	+.15	-.12	-.10	+.19	+.18		
Beta Coefficients for:										
2.5% span length.	-.21*	+.32	+.28*	-.03*	-.47*	-.18*	+.20*	+.20*		
Micronaire.	+.10*	-.43	-.50*	-.64	+.56	+.61	-.52	-.53		
Fiber str. (1/8" gage).	-.08*	+.22*	+.07*	+.27*	-.19*	-.27*	+.24*	+.19*		
Uniformity ratio.	-.53	+.20*	-.01*	+.23*	+.34*	-.21*	-.15*	-.15*		
Elongation (1/8" gage). ....	.00*	-.02*	+.07*	+.08*	-.08*	-.07*	+.15*	+.14*		
Regression Equation:										
Constant (a).	+.55.21	-131.75	+.369	+.229	+.130.92	+.59.68	+.784	+.332		
Regression Coef. for:										
2.5% span length.	-.848	+.149.96	+.325	-.33	-174.36	-58.81	+.49.29	+.40.44		
Micronaire.	+.33	-16.96	-.49	-.60	+.17.34	+.16.53	-10.48	-8.78		
Fiber str. (1/8" gage).	-.07	+.215	+.02	+.06	+.145	-.1.84	+.19	+.78		
Uniformity ratio.	-.63	+.267	-.01	+.08	+.3.64	+.2.01	-1.30	-.87		
Elongation (1/8" gage).	-.01	-.96	+.07	+.08	-2.49	-1.86	+.3.17	+.2.46		
Standard Error (\pm). ....	.98	6.17	.36	.23	8.99	8.71	7.58	6.20		

*Statistically insignificant

MEASURES USED IN STATISTICAL ANALYSIS

Some of the statistical concepts used in this study may be unfamiliar to many who will find the information in this report useful. Results reported in this study include the means, standard deviations, simple and multiple correlation coefficients, beta values, partial correlation coefficients and regression equations for each cotton quality measurement. Formulas of each of these results may be found in any good textbook on statistical correlation. However, for those not familiar with these concepts the following common language explanation is given for each item as it is used in this report:

- (1) Mean Value is the simple arithmetical average of each measured property for the spinning lots included in the study.
- (2) Standard deviation is a measure of dispersion around the mean value, expressed in the same terms as the variable. For a normal distribution, approximately 68 percent of the values will be within plus or minus one standard deviation of the mean, 95 percent within plus or minus two standard deviations, and nearly all values will be within plus or minus three standard deviations.

Example: (from Table 15, column 1, page 81)

The mean or average value for picker and card waste, the dependent variable is 5.8 percent and the standard deviation is 1.27 percent. This indicates that 68 percent of the lots tested in the medium staple group should contain between 4.5 and 7.1 percent waste (5.8 ± 1.27). Ninety five percent of the lots tested would have from 3.3 to 8.3 percent waste (5.8 ± 2.54) and nearly all of the test lots would show values between 2.0 and 9.6 percent (5.8 ± 3.81).

- (3) Simple correlation coefficient (r) is a measure of the linear relationship between two variables, ie. how one variable is associated with the other. A correlation coefficient of 0 indicates no relationship, and 1.0 indicates a perfect relationship. A plus sign before the correlation coefficient indicates that the values for both variables change in the same direction, whereas a minus sign indicates that they change in opposite directions.

Example: (from Table 15, column 1, page 81)

The simple correlation coefficient (r) of grade index with picker and card waste is -.60. This indicates that grade index and picker and card waste are related. It further indicates by the - sign that as one goes up or down the other goes in the opposite direction.

- (4) Multiple correlation coefficient (R) is a measure of the linear relationship between one dependent variable and two or more independent variables. It has no plus or minus sign because one independent variable may contribute positively, and another negatively, in explaining the variation in the dependent variable. The multiple R may fall between 0 and 1.0, with 0 indicating no relationship and 1.0 a perfect relationship.

Example: (from Table 15, column 1, page 81)

The multiple R for the dependent variable of picker and card waste with independent variables of grade index, staple length and micronaire is .70. This indicates that the combination of grade index, staple length and micronaire shows a definite relationship to picker and card waste. It does not explain, however, whether grade index, staple length and micronaire contribute positively or negatively to picker and card waste or which of the three is most important.

(5) Although the coefficient of determination (R^2 , or r^2) is not given, it may be easily obtained by squaring the simple r's or multiple R's and multiplying by 100. This gives the percentage of variation explained, a measure of the amount of variation in the dependent variable which is explained by variation in the independent variables.

Example:

The multiple R in the example above is .70. When squared and multiplied by 100 the result is 49.0. This means that 49.0 percent of the variation in picker and card waste is explained by grade index, staple length and micronaire. The remaining 51.0 percent of the variation is unexplained.

(6) Partial correlation coefficient (r) in a multiple analysis is similar to a simple correlation coefficient. The simple r indicates the statistical relationship between two variables without any control of other variables. In a multiple analysis, the partial correlation coefficient is one measure of the net relationship between one independent variable and the dependent variable while the influence of the other independent variables are statistically removed.

Example: (from Table 15, column 1, page 81)

The partial correlation coefficients (r) for picker and card waste with grade index, staple length and micronaire are: -.55 for grade index, -.11 for staple length and -.39 for micronaire. This shows that picker and card waste is related to grade index and that when one goes up or down the other goes in the opposite direction. It further shows that staple length and micronaire have less affect on picker and card waste than grade index since the values for these two variables are much smaller.

(7) Beta coefficients (B) in a multiple correlation are sometimes preferred over use of partial r's. A Beta coefficient is another measure of the relative importance of a variable in a multiple correlation, with the influence of the other variables removed. Quite often, only one of these measures (Beta or partial r) is used for interpretation; both are included in this report. An asterisk beside the Beta value indicates that the result is statistically insignificant (less than three times its standard error).

Example:

The Beta (B) coefficients in the above example are -.51 for grade index, -.10* for staple length and -.32 for micronaire. This shows the same relative results as the partial correlation coefficients (r) and the * further indicates that the -.10 Beta value for staple length is statistically insignificant.

(8) Regression equation or estimating equation is used to predict changes in the dependent variable which will result from changes in the independent variable or variables. It is written:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_NX_N$$

where Y is the dependent variable and the X's are independent variables.

The constant "a" indicates the starting point or height of the regression line when it is to be plotted on a graph or to be used in calculating changes in the dependent variable. The regression coefficient "b" indicates the change in the dependent variable that is associated with each unit change in the independent variable. The spread or scatter of the data around the regression line is measured by the standard error. The standard error has the same relationship to the regression line as the standard deviation has to the mean value. (see paragraph (2) above)

Example: (from Table 15, column 1, page 81)

Regression equation for picker and card waste:

Constant (a)	+25.07
Regression coefficients (b)	
Grade index	-.12
Staple length	-.13
Micronaire	-.76
Standard error	±.91

With regression coefficients (b) of -.12 for grade index, -.13 for staple length and -.76 for micronaire reading the following average conditions should exist:

1. With any unit change in grade index, picker and card waste percentage should change .12 in the opposite direction.
2. With any unit change (32nd) in staple length, picker and card waste percentage should change .13 in the opposite direction.
3. With any unit change (1.0) in micronaire reading, picker and card waste percentage should change .76 in the opposite direction.

Expressing this equation algebraically we have:

$$\begin{aligned} \text{Estimated picker and card waste (percent)} = \\ 25.07 - .12 (\text{grade index}) - .13 (\text{staple length}) - .76 (\text{micronaire}) \end{aligned}$$

Thus if we wished to predict the amount of picker and card waste from a bale of cotton of Strict Low Middling (94 index), a staple length of 1-3/32 inches (35 32ds) and a micronaire of 4.4, the equation would be:

$$\text{Estimated picker and card waste} = 25.09 - .12(94) - .13(35) - .75(4.4)$$

$$\text{Estimated picker and card waste} = 5.92\%$$

The standard error of the equation of $\pm .91$ indicates that actual picker and card waste obtained from this kind of cotton would be within plus or minus .91 percent (between 5.01 and 6.83) 68 times in 100.

A check on the accuracy of this figure can be made from the average results for SIM grade, 1-3/32 inch staple, in Table 3 for the different Areas.

Regression equations are given in the tables for multiple relationships only. Equations for simple relationships may be calculated by using the formula:

$$Y = a + bX$$

$$\text{where } a = \text{Mean } Y - b(\text{Mean } X)$$

$$b = r \frac{\text{Std. Dev. } Y}{\text{Std. Dev. } X}$$

INTERPRETING STATISTICAL DATA

In referring to the data presented in the tables of this report, it is well to keep in mind several factors which influence the results and could lead to erroneous conclusions.

Correlation values are significantly influenced by the specific variables included, and by their number. This is due to the interrelationships of fiber properties. As interrelated properties are added to a correlation, the specific contribution of a given property may decrease sharply while at the same time the overall correlation will increase. For example, a correlation of staple length with yarn strength usually shows a good relationship, with a large amount of the variation in yarn strength explainable by differences in staple length. But, as other measures are taken into consideration, particularly fiber strength at 1/8-inch gage, the importance of staple length in explaining the total variation in yarn strength decreases rather sharply, even though the total variation explained is increased. This situation occurs because fiber strength is more closely related to yarn strength than is staple length. Yet, when fiber strength is not included in the correlation, some of the effects of strength are evidenced through the interrelation of strength and staple length.

Perhaps the most important fact to be kept in mind is that the use of only one statistic, such as a multiple R, a partial r, or a Beta value, can lead to erroneous conclusions. In order to determine the importance of any variable, all of the statistical items for each study should be considered.

BASIS FOR INTERPRETATION OF TEST RESULTS

The following explanation of the data published in Tables 1 through 8 of this report may be helpful in the interpretation of test results:

Classification

Classification was made in accordance with the official Cotton Standards for grade and staple length. These results are presented under the usual terms for the individual lots but the grade values were converted to an index for averaging in the summary tables.

Grade index, as reported in the summary tables is designed to reflect differences in market value and provides a method for averaging the grade for a number of individual lots. Middling grade is used as the basis of 100, and higher or lower index numbers reflect higher or lower average market values, respectively. Index values for the various grades of upland cotton are shown below:

		Grade Index						
Name	Grade Code:	:	:	:	:	:	:	:
		Plus	White	Spotted	Spotted	Tinged	Light Gray	Light Gray
		(0)	(1)	(2)	(3)	(4)	(5)	(6)
Good Middling	(1):		105	103	101		99	93
Strict Middling	(2):		104	102	99	91	98	91
Middling	(3):	102	100	97	93	82	92	84
Strict Low Middling	(4):	97	94	89	83	75	85	75
Low Middling	(5):	90	85	80	75	68		
Strict Good Ordinary	(6):	81	76					
Good Ordinary	(7):	73	70					
Below Grade	(8):		60					

The grade of cotton is obtained by evaluating color, leaf and preparation in relation to the official standards. Grade provides an indication of fiber color and the waste content of a sample of cotton. Experience has shown the average relationship between picker and card waste and various grades of upland cotton to be approximately as given in the tabulation shown in the

subsequent section on manufacturing waste. In comparing these average grade figures with the picker and card waste data, it should be understood that variations from the averages for individual samples are attributable to the nature of the extraneous material present in the cotton, the characteristics of the fiber, and whether the grade designation was low because of poor color.

Staple length is the length of a typical portion of the fibers in the samples as determined by the classer in comparison with official standards. Uniformity of fiber length, as well as other fiber properties, influence to some extent the classer's selection of the typical portion of the fibers on which the staple length designation is based. In general, there is a fairly close relationship between the staple length as designated by the classer and the fineness and strength of the yarn that can be manufactured from the cotton. These relationships, however, are also influenced by other fiber properties, the measurements of which will be discussed in the paragraphs which follow.

Fiber Tests

Fiber length data were obtained by the Digital Fibrograph method for the short, medium and long staple American upland samples and by the array method for the extra long American Pima and upland samples. Briefly, the Digital Fibrograph method consists of placing representative specimens of cotton weighing approximately 30 centigrams at random on a pair of combs, parallelizing the beards of cotton extending from one side of the combs, and scanning these beards photoelectrically on the instrument at 3 length intervals beginning at 0.15 inch from the teeth of the combs and ending near the outer fringe. The 2.5 percent span length and the 50/2.5 uniformity ratio values reported for each lot are based on five specimens tested by each of two technicians.

The Digital Fibrograph 2.5 percent span length values reported indicate the length which will be spanned by 2.5 percent of the fibers when they are parallel and randomly distributed. It is also the length where the amount of fibers indicated by the instrument is 2.5 percent of the amount at the starting point of 0.15 inch. The Digital Fibrograph 2.5 percent span length values are closely related to staple length designations.

The Digital Fibrograph 50/2.5 uniformity ratio values reported indicate the relative uniformity of fiber length in the samples. They represent the ratios between the 50 percent span length and the 2.5 percent span length, expressed as percentages. Larger values indicate more uniform fiber length distribution. Unusually low fiber length uniformity tends to increase manufacturing waste, to make processing more difficult, and to lower the quality of the product. The following adjective descriptions will serve to classify cottons from the standpoint of 2.5 percent span length and fiber length uniformity:

<u>2.5 percent span length</u>		<u>50/2.5 uniformity ratio</u>	
Below 1.00	Short	Below 42	Very low
1.00 - 1.14	Medium	42 - 43	Low
1.15 - 1.29	Long	44 - 45	Average
Above 1.29	Extra-long	46 - 47	High
		Above 47	Very high

Data source - 1575 American upland lots tested from the crops of 1966-68.

Array tests for the extra long staple American Pima and upland samples were performed on the Suter-Webb fiber sorter. Briefly, this method consists of parallelizing the fibers in a representative 75-milligram specimen of cotton through a series of combs, separating the fibers into length groups at 1/8-inch intervals, and weighing the fibers in each length group. The upper quartile length and coefficient of variation values reported are based on one specimen tested by each of two technicians.

The array upper quartile length values reported indicate the length which is exceeded by 25 percent of the weight of the fibers in the samples. They are closely related to and longer than both the Fibrograph and the classer's staple designations. This relationship may vary, however, because the methods measure different fiber length characteristics.

The array coefficient of length variation values reported indicate the relative variability of fiber length in the samples. They represent the standard deviation of the weight-length frequencies expressed as a percentage of the mean length. Smaller values indicate more uniform fiber length distributions. Excessive fiber length variation tends to increase manufacturing waste, to make processing more difficult, and to lower the quality of the product. It is, therefore, considered desirable for a cotton to have a low coefficient of variation. The following adjective descriptions will serve to classify cottons from the standpoint of upper quartile length and fiber length variation:

<u>Upper Quartile Length</u>		<u>Coefficient of Fiber Length Variation</u>	
Below 1.10	Short	Below 26	Very low variation
1.10 - 1.24	Medium	26 - 29	Low variation
1.25 - 1.39	Long	30 - 33	Average variation
Above 1.39	Extra Long	34 - 37	High variation
		Above 37	Very high variation

Data source - 830 American upland lots tested from the crops of 1958-60 (more recent data not available).

Fiber fineness and maturity in combination were determined by the micronaire test. This is an instrument test which measures the resistance of a plug of cotton to air flow. A representative standard weight of cotton fibers is placed in the instrument specimen holder and compressed to a fixed

volume. Air at a known pressure is forced through the specimen and the amount of flow is indicated by a direct reading scale. Readings obtained are relative measures of either the weight per unit length, or the cross sectional size of the fibers. Because the instrument measures may differ from the actual weight per inch, depending upon the fiber characteristics of the sample, the results are reported in terms of "micronaire reading" instead of micrograms per inch. These readings are taken from the curvilinear scale adopted in 1950, and now in international use. Fiber fineness contributes to yarn strength, particularly when fine numbers are spun, but it also tends to increase neppiness and to require a reduced rate of processing.

Fiber maturity, also an important factor affecting the appearance of yarns and fabrics, is a desirable characteristic from the standpoint of low picker and card waste. Immature fibers are susceptible to the formation of neps, and contribute to lower yarn appearance grades. The desirability of micronaire reading, therefore, depends on the specific end product or use of the cotton.

Several instruments, including the Micronaire, Fibronaire, and Port-Ar, may be used for these tests. All instruments now use the same scale and report results in the same terms, i.e. "micronaire reading". The micronaire reading is now a part of the official standards for upland cotton along with grade and staple length.

Fiber strength is an important factor in determining yarn strength. Cottons with good fiber strength usually give less trouble in the manufacturing processes than the weak fibered cottons. Tests for fiber strength were made without a space between the clamp jaws (0 gage) using the Pressley flat bundle tester, and with a 1/8-inch spacer between the clamp jaws (1/8-inch gage) using the Stelometer. Strength results from both the Pressley and the Stelometer were controlled at the same level by use of standard calibration cottons. Use of the Stelometer also provides a measure of fiber elongation. Comparative tests have shown that the results of the 1/8-inch gage tests are more highly correlated with yarn strength than the results of the zero gage tests. Results for both methods are reported, however, because the zero gage tests are widely used by the cotton industry.

The results for the Pressley zero gage test are reported in terms of thousand pounds per square inch, as calculated by the use of Formula 1. These results may be converted to other methods of expressing fiber strength by use of Formulas 2, 3, and 4:

$$(1) \text{ Thousand pounds per square inch (Mpsi) } =$$

$$\frac{\text{breaking load in lb} \times 10.81}{\text{bundle weight in mg}}$$

$$(2) \text{ Grams per tex (gm/tex) } = \text{Mpsi} \times 0.496$$

(3) Strength-weight ratio = Mpsi \div 10.81

(4) Strength-weight ratio = gm/tex \div 5.36

The results of the 1/8-inch gage tests are reported in terms of grams per tex in accordance with the recommendations of the American Society for Testing and Materials (ASTM), and the International Standards Organization (ISO). A tex unit is equal to the weight in grams of 1000 meters of the material. There is a correlation between the 1/8-inch gage strength test results and fiber length. Cottons with short lengths tend to have lower average strength values than long staple cottons. Results for 1/8-inch gage tests are calculated by use of Formula 5. Stelometer results are adjusted to Pressley level by use of calibration cottons.

(5) Grams per tex = $\frac{\text{breaking load (kg)} \times 15}{\text{bundle weight in mg}}$

The following descriptive terms may be applied to the data shown in this report:

<u>Staple length group and descriptive designation</u>	<u>Zero gage strength (thousand psi)</u>	<u>1/8-inch gage strength (grams per tex)</u>
Short staple:		
Low	70 - 75	18 - 19
Average	76 - 81	20 - 21
High	82 - 87	22 - 23
Medium staple:		
Low	74 - 80	20 - 21
Average	81 - 87	22 - 23
High	88 - 94	24 - 25
Long staple:		
Low	85 - 88	23 - 24
Average	89 - 92	25 - 26
High	93 - 96	27 - 28
Extra-long staple:		
Low	93 - 96	31 - 32
Average	97 - 100	33 - 34
High	101 - 104	35 - 36

Data source - 291 short staple, 1206 medium staple, 78 long staple, and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Fiber elongation results were obtained in connection with the 1/8-inch gage fiber strength tests by using the Stelometer instrument. The following adjective ratings will assist in the interpretation of the fiber elongation results reported:

<u>Descriptive designation</u>	<u>Fiber elongation (percent)</u>
Very low	5.3 and below
Low	5.4 - 6.2
Average	6.3 - 7.1
High	7.2 - 8.0
Very high	8.1 and above

Data source - 1575 American upland lots tested from the crops of 1966 - 68.

Color measurements were made on samples of raw stock from each lot by using the Nickerson-Hunter Colorimeter. The basic color values reported are in terms of grayness and yellowness scales designed especially for cotton. The grayness scale ranges from 0 for the brightest samples (no gray) through 9 for the darkest color. The yellowness scale ranges from 0 for the lightest color (no yellow) to 9 for the yellowest color. In other words, the larger the number reported the darker or yellower the cotton becomes. The relationship of these new cotton color scales to Rd and +b values and to the color of the Universal Grade Standards for upland cotton is shown in Figure 2 and for American Pima cotton in Figure 3.

The color of raw cotton is also reported as a single index number. The relationship of the index number to Rd and +b and the color of the Universal Grade Standards for upland cotton is shown in Figure 4.

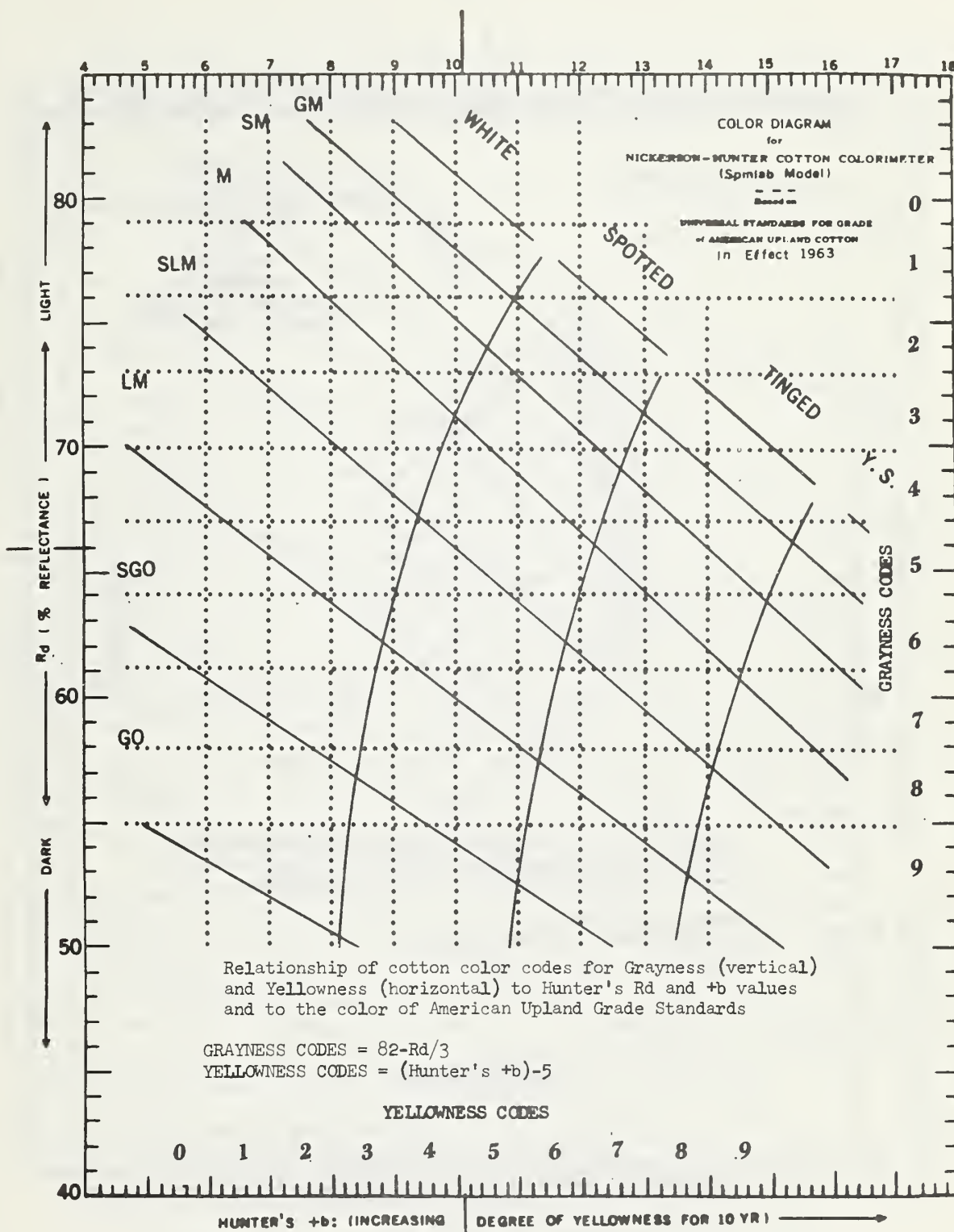


Fig. 2--Colorimeter diagram for upland cotton

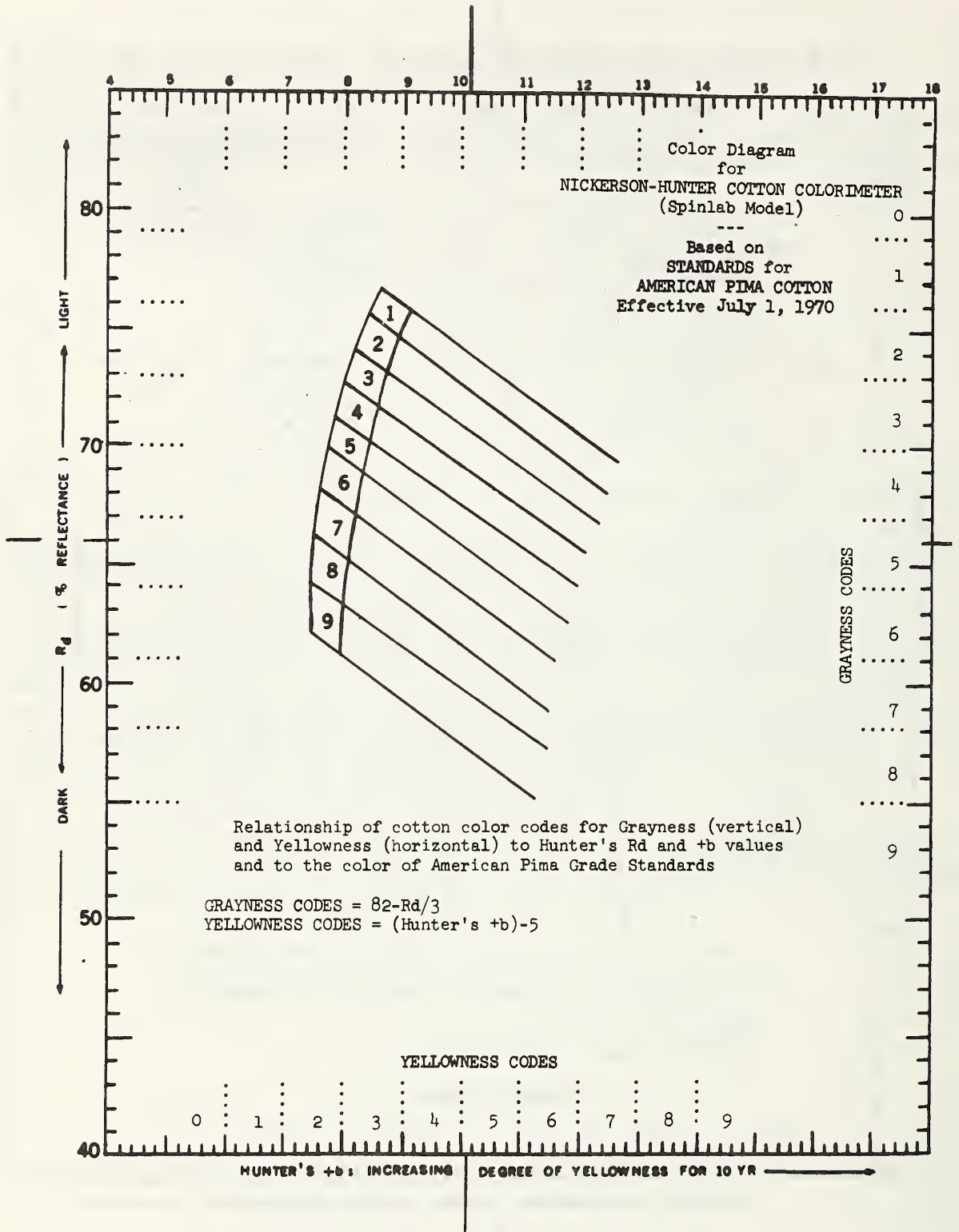


Figure 3.--Colorimeter diagram for American Pima cotton.

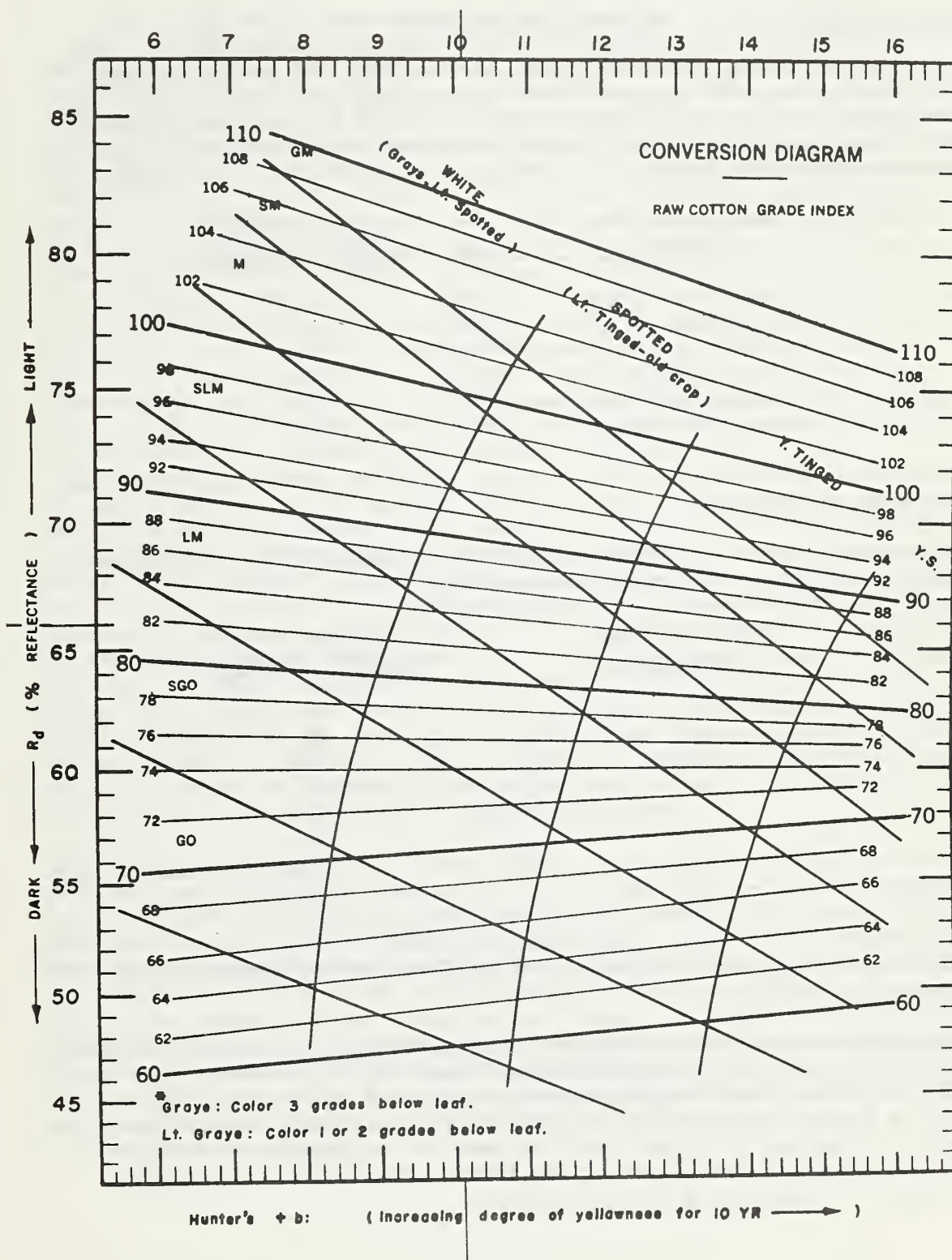


Fig. 4--Conversion diagram for converting raw cotton color to color index

Nonlint content for the various lots was determined by the use of the Shirley Analyzer which separates the lint from the foreign matter. The total nonlint values reported include both visible and invisible loss. These results are distinguished from total picker and card waste in that practically no fiber is included, whereas textile mill wastes include appreciable amounts of fiber. Tests performed in previous years show the following average relationship of Shirley Analyzer nonlint to grade:

<u>American upland grade</u>	<u>Code</u>	<u>Average nonlint content (percent)</u>
Strict Middling	(21)	1.7
Middling	(31)	2.2
Strict Low Middling	(41)	2.9
Low Middling	(51)	3.9
Strict Good Ordinary	(61)	5.3
Good Ordinary	(71)	6.9

Data source - 5725 American Upland Color and Trash Survey samples tested from crops of 1968-72.

The following scale has been developed to represent the average nonlint content for grades of American Pima cotton:

<u>American Pima grade</u>	<u>Average nonlint content (percent)</u>
1	2.0
2	2.3
3	2.6
4	3.3
5	4.1
6	5.3
7	7.0
8	8.5
9	9.9

Data source - 935 American Pima Color and Trash Survey samples tested from the crops of 1968-72.

Differences between results obtained for individual lots and the average percentages shown for the grades may be caused by: (1) Grade is a combination of color, leaf and preparation; any one of which may be the limiting factor, (2) there is a range of trash allowable within each specific grade and (3) these data are based on weight and do not take into consideration the nature of the trash, which may be as important as weight in determining the final grade.

Yarn Processing Tests

The results of yarn processing tests reported in this summary were obtained by procedures adopted in 1962 which include heavier weights for laps, slivers and rovings than those used in previous years. These procedures also include spinning from single roving instead of double roving for the two standard yarn numbers and the spinning of a third yarn number on all the samples to provide a small-scale measure of spinning end-breakage or spinning performance. In 1965, metallic card clothing was installed on the carding machines to replace the conventional fillet clothing used previously, and in 1966, crusher rolls were installed on the card machines. These changes reflect similar changes that have taken place in the cotton textile industry including increased emphasis on running quality since the Mid-1940's when long-draft systems were adopted for both the roving and spinning processes in the routine laboratory spinning test procedures. These changes were designed to bring the laboratory processing procedures more in line with current textile mill practices and thus make the processing evaluations more applicable to present day mill operations.

The card production rate employed and the yarn numbers spun for each cotton were selected on the basis of the staple length expected in the specified area of growth as described in the earlier section on test procedures. Four different length groupings were used to cover the range of cottons grown in this country and to approach commercial practices in processing these cottons. The spinning twist multipliers were selected to provide maximum yarn strength on the basis of staple length. Details of the spinning test procedures are shown at the end of this section of the report (Table 24). Results of previous tests show that decreasing the card production rate results in fewer neps, improved yarn appearance grades, and removal of more waste at the card. Results of tests on the various lots should therefore be compared directly for only those lots in the same length group which were processed in a comparable manner.

Manufacturing waste reported for a sample of cotton is important because excessive waste increases the cost of cotton products. The percentage of waste extracted by the picking and carding processes in performing a spinning test provides a measure of manufacturing waste. There is an average relationship between this waste and grade as discussed in the previous section on the grade of cotton. The rate at which the cotton is carded, however, affects the picker and card waste values because the more thorough carding action obtained when the carding rate is decreased extracts a larger quantity of waste. The longer staple cottons are generally carded at a lower rate than the shorter cottons in order to obtain acceptable yarn quality. Tests performed in recent years show the following average relationship of picker and card waste to grade:

American upland grade	Code	Average picker and card waste (percent)	American Pima	Average picker and card waste (percent)
Strict Middling	(21)	4.7	1	7.5
Middling	(31)	5.1	2	7.9
Strict Low Middling	(41)	5.7	3	8.4
Low Middling	(51)	6.7	4	9.5
Strict Good Ordinary	(61)	7.8	5	10.8
Good Ordinary	(71)	8.9	6	11.7
			7	13.7
			8	15.2
			9	17.5

Data source - 5561 samples of American upland cotton and 431 samples of American Pima cotton tested for Shirley Analyzer nonlint content from the crops of 1966-68 and picker and card waste calculated from its relationship to Shirley Analyzer nonlint content.

The percentage of waste removed by the comber is reported in addition to the picker and card waste for cottons processed into combed yarn. The shorter staple cottons are processed through the comber with a closer setting than for the longer staple cottons because smaller comber waste percentages are usually extracted from this cotton in commercial practice.

Yarn strength is perhaps the most important and reliable test of yarn quality. Yarn strength not only determines the range of the usefulness of a given cotton, but is also an indication of spinning and weaving performance. The yarn strength test is performed on 120 yard skeins (80 turns on a 1.5 yard reel). Results reported are based on the average of 25 skeins for each yarn number. Yarn strength is reported in terms of skein strength since studies have shown that such strength values are more closely related to fabric strength as well as to fiber properties than single strand yarn strength. Skein strength data for the two numbers spun are reported for each lot. Length, strength and fineness influence yarn strength more than other fiber properties.

The following descriptive terms may be of help in determining the relative level of yarn strength in their report:

<u>Kind of yarn, staple length group and description</u>	<u>Yarn skein strength in pounds for the specified yarn numbers</u>	
Carded yarns:		
Short staple group:	<u>8s</u>	<u>22s</u>
Low	265 - 290	78 - 86
Average	291 - 316	87 - 95
High	317 - 342	96 - 104
Medium staple group:	<u>22s</u>	<u>50s</u>
Low	95 - 104	30 - 35
Average	105 - 114	36 - 41
High	115 - 125	42 - 47
Long staple group:	<u>22s</u>	<u>50s</u>
Low	125 - 131	45 - 48
Average	132 - 138	49 - 52
High	139 - 145	53 - 56
Combed yarns:		
Long staple group:	<u>22s</u>	<u>50s</u>
Low	142 - 149	52 - 55
Average	150 - 157	56 - 59
High	158 - 165	60 - 63
Extra-long staple group:	<u>50s</u>	<u>80s</u>
Low	66 - 68	36 - 37
Average	69 - 71	38 - 39
High	72 - 74	40 - 41

Data source - 291 short staple, 1206 medium staple, 78 long staple and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Yarn elongation results were obtained in connection with yarn skein strength tests. Elongation in the yarn is highly correlated with fiber elongation. Yarns with high elongation give less end breakage in weaving than yarns with low elongation.

The following descriptive terms may be of some help in determining the relative levels of yarn elongation:

<u>Kind of yarn, staple length group, and description</u>	<u>Yarn elongation in percent for the specified yarn numbers</u>	
Carded yarns:		
Short staple group:	<u>8s</u>	<u>22s</u>
Low	6.5 - 7.3	5.5 - 6.2
Average	7.4 - 8.1	6.3 - 7.0
High	8.2 - 9.0	7.1 - 7.8
Medium staple group:	<u>22s</u>	<u>50s</u>
Low	5.4 - 5.9	4.0 - 4.5
Average	6.0 - 6.5	4.6 - 5.1
High	6.6 - 7.1	5.2 - 5.7
Long staple group:	<u>22s</u>	<u>50s</u>
Low	6.2 - 6.5	5.2 - 5.4
Average	6.6 - 6.9	5.5 - 5.7
High	7.0 - 7.3	5.8 - 6.0
Combed yarns:		
Long staple group:	<u>22s</u>	<u>50s</u>
Low	6.6 - 6.9	5.5 - 5.7
Average	7.0 - 7.3	5.8 - 6.0
High	7.4 - 7.7	6.1 - 6.3
Extra-long staple group:	<u>50s</u>	<u>80s</u>
Low	5.6 - 5.8	4.6 - 4.8
Average	5.9 - 6.1	4.9 - 5.1
High	6.2 - 6.4	5.2 - 5.4

Data source - 291 short staple, 1206 medium staple and 78 long staple and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Yarn Appearance refers to the relative evenness, smoothness and freedom from foreign material of the yarn as evaluated by a visual comparison of the yarn with the latest standards adopted by the American Society for Testing and Materials. Since appearance is very important in many types of cotton products, high yarn appearance grades are desirable. The following descriptive terms may be of help in determining the relative levels of yarn appearance in this report.

Kind of yarn,
staple length group,
and description

Yarn appearance index
for the
specified yarn numbers

Carded yarns:

Short staple group:

	<u>8s</u>	<u>22s</u>
Low	105 - 113	92 - 104
Average	114 - 122	105 - 117
High	123 - 130	118 - 130

Medium staple group:

	<u>22s</u>	<u>50s</u>
Low	93 - 105	77 - 87
Average	106 - 118	88 - 98
High	119 - 130	99 - 109

Long staple group:

	<u>22s</u>	<u>50s</u>
Low	71 - 86	65 - 78
Average	87 - 102	79 - 92
High	103 - 118	93 - 106

Combed yarns:

Long staple group:

	<u>22s</u>	<u>50s</u>
Low	81 - 97	70 - 85
Average	98 - 114	86 - 101
High	115 - 130	102 - 117

Extra-long staple group:

	<u>50s</u>	<u>80s</u>
Low	102 - 111	98 - 106
Average	112 - 121	107 - 115
High	122 - 130	116 - 124

Data source - 291 short staple, 1206 medium staple, 78 long staple and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Yarn Appearance Grades

<u>Grade</u>	<u>Index</u>
A	130
B+	120
B	110
C+	100
C	90
D+	80
D	70
Below D	60

Yarn imperfections are reported for the two yarn numbers spun for each lot of cotton. These results were obtained on "Neptel" instruments which electronically count the abrupt changes in the silhouette of the yarn while passing it through a beam of light. They are expressed as the number of imperfections per 50 yards of yarn and are based on the average of 10 determinations. This value is an instrument measure of product quality which is associated with the characteristics of the cotton. It is more highly correlated with fiber properties than either neps in card web or yarn appearance grade. The following descriptive terms may be of help in determining the relative level of yarn imperfections in this report:

<u>Kind of yarn, staple length group, and description</u>	<u>Yarn imperfections for the specified yarn numbers</u>	
Carded yarns:		
Short staple group:	<u>8s</u>	<u>22s</u>
Low	6 - 31	6 - 21
Average	32 - 57	22 - 37
High	58 - 83	38 - 53
Medium staple group:	<u>22s</u>	<u>50s</u>
Low	3 - 15	2 - 11
Average	16 - 28	12 - 21
High	29 - 41	22 - 31
Long staple group:	<u>22s</u>	<u>50s</u>
Low	7 - 22	6 - 17
Average	23 - 38	18 - 29
High	39 - 54	30 - 41
Combed yarns:		
Long staple group:	<u>22s</u>	<u>50s</u>
Low	0 - 8	0 - 6
Average	9 - 20	7 - 16
High	21 - 32	17 - 26
Extra-long staple group:	<u>50s</u>	<u>80s</u>
Low	0 - 1	0 - 1
Average	2 - 3	2 - 3
High	4 - 5	4 - 5

Data source - 291 short staple, 1206 medium staple, 78 long staple and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Spinning potential yarn number indicates the finest yarn number that can be spun from a cotton sample without any end-breakage when using specific processing procedures. In performing these tests, new travelers, draft gears, and twist gears are installed for the selected yarn number and it is spun for a 15-minute trial period. The yarn number selected is considered acceptable if there is an end-breakage involving 5 to 15 of the 96 spindles employed during the trial run. If end-breakages occur on less than 5 or more than 15 of the 96 spindles during the trial period, a different yarn number is selected to be spun for another 15-minute trial period until the acceptable end-breakage rate is obtained. The acceptable trial period is also used for a warm-up period which is followed by a 1-hour test period. The spinning potential yarn number is calculated from the deviation of the actual yarn number spun from the desired yarn number and the number of spindles with end-breakages during the 1-hour test run. The following descriptive terms may be of help in determining the relative level of spinning potential yarn numbers in this report:

	<u>Spinning Potential (SPY No.)</u>		
	<u>Short staple group</u>	<u>Medium staple group</u>	<u>Long staple group</u>
Low	31 - 39	55 - 63	77 - 83
Average	40 - 48	64 - 72	84 - 90
High	49 - 57	73 - 81	91 - 97

Data source - 123 short staple, 688 medium staple and 48 long staple lots of cotton tested from the crops of 1967-68.

Chemical Finishing Tests

Information with respect to the bleaching and dyeing properties of different varieties and growths of cotton is of particular significance to textile manufacturers from the standpoint of providing a basis for avoiding problems that may result from blending different varieties and growths having different dyeing properties. Data with respect to the chemical finishing properties of the principal varieties and growths of cotton as herein reported may thus be used as a basis for selecting cottons of similar finishing properties. Details of the chemical finishing tests are described in Agricultural Information Bulletin No. 167 - "Bleaching, Dyeing, and Mercerizing Test Results on Some Varieties of Cotton Grown by Selected Cotton Improvement Groups, Crop of 1955".

Color measurements of cotton yarn samples were made on a Gardner Automatic Color Difference Meter. These values are reported in terms of R_d and b , two of the three scales on the instrument. The R_d scale measures percentages of diffuse reflectance from 0 to 100. The b scale provides a measure of yellowness in the direction of $+b$ and of blueness in the direction of $-b$. The degree of either yellowness or blueness increases as the scale numbers increase. These data when plotted with R_d on the vertical ordinate and with

b on the horizontal ordinate are similar to the color values for raw cotton when plotted in relation to the official grade standards as described in the earlier section on color of raw stock.

While the color factors R_d and b are not independent of each other and should be considered together in any overall interpretation, for many purposes it would be convenient in evaluating results to have them in terms of a single number. For raw cotton the grade index provides one way to do this in a straightforward manner. A similar method has been followed in developing conversion formulae and diagrams for each form of cotton measured for color as a part of the chemical finishing studies of the Cotton Division. In each, the index for Middling is held at 100 and that for Good Ordinary is held close to 70. By use of such indices the color measurements of raw stock, gray yarns, bleached yarns, and bleached and dyed yarns may be converted to a single number specification. For details see "Grade and Color Indexes Developed for Evaluating Results of USDA Cotton Finishing Tests", (AMS-245, June 1958).

Table 24--Cotton: Standard machine settings and specifications for processing specified staple length groupings

Process	Staple length groups			
	Short	Medium	Long	Extra long
1. PICKER				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
Each test lot is processed through a finisher type picker twice to produce the specified weight of lap.....ounces per yard	14	14	14	11
Type of beater.....	Kirschner	Kirschner	Kirschner	Kirschner
Beater speed.....r.p.m.	1,000	1,000	1,000	1,000
Settings:				
Feed roll to beater.....inches	3/16	3/16	3/16	3/8
Grids to beater, top.....inches	5/16	5/16	5/16	9/16
Grids to beater, bottom.....inches	11/16	11/16	11/16	11/16
2. CARD				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
Picker lap fed.....ounces per yard	14	14	14	11
Sliver delivered.....grains per yard	50	50	50	40
Production rate.....pounds per hour	12-1/2	9-1/2	6-1/2	4-1/2
Doffer speed.....r.p.m.	11	8	6	4
Cylinder speed.....r.p.m.	165	165	165	165
Flat speed.....inches per minute	2-7/8	2-7/8	2-7/8	2-7/8
Licker-in speed.....r.p.m.	435	435	435	435
Clothing:				
Cylinder, Hollingsworth metallic.....number	35	35	25	25
Doffer, Hollingsworth metallic.....number	29	29	29	29
Flats, Fillet.....number	110	110	130	130
Settings:				
Feed plate to licker-in.....inches	0.010	0.010	0.010	0.017
Mote knife to licker-in, top.....inches	.012	.012	.012	.012
Mote knife to licker-in, bottom.....inches	.010	.010	.010	.010
Licker-in screen, front.....inches	.029	.029	.029	.029
Licker-in screen, back.....inches	.017	.017	.017	.017
Licker-in to cylinder.....inches	.007	.007	.007	.007
Flats to cylinder, back, center, and front.....inches	.009	.009	.009	.009
Back plate to cylinder, top.....inches	.029	.029	.029	.029
Back plate to cylinder, bottom.....inches	.034	.034	.034	.034
Front plate to cylinder, top.....inches	.029	.029	.029	.029
Front plate to cylinder, bottom.....inches	.034	.034	.034	.034
Doffer to cylinder.....inches	.007	.007	.007	.007
Cylinder screen, back.....inches	.029	.029	.029	.029
Cylinder screen, center.....inches	.034	.034	.034	.034
Cylinder screen, front.....inches	3/16	3/16	3/16	3/16
Doffer comb to doffer.....inches	.022	.022	.022	.022
Crusher rolls pressure.....pounds	281	281	281	281
3. SLIVER LAPPER (combed only)				
Standard atmospheric conditions:				
Temperature.....degrees F.	--	--	75	75
Relative humidity.....percent	--	--	60	60
Sliver fed, 20 each.....grains per yard	--	--	50	40
Lap delivered.....grains per yard	--	--	595	525
Speed.....yards per minute	--	--	46	46
Roll settings (center to center):				
First to second.....inches plus fiber length 1/	--	--	5/16	5/16
Second to third.....inches plus fiber length 1/	--	--	9/16	9/16

1/ Allowances listed are in addition to fiber lengths in terms of "pulls" made on card sliver. These pulls are estimated from Fibrograph length tests except for extra long staple cottons.

Table 24--Cotton: Standard machine settings and specifications for processing specified staple length groupings--Continued

Process	Staple length groups			
	Short	Medium	Long	Extra long
4. RIBBON LAPPER (combed only)				
Standard atmospheric conditions:				
Temperature.....degrees F.	--	--	75	75
Relative humidity.....percent	--	--	60	60
Laps fed, 4.....grains per yard	--	--	595	525
Laps delivered.....grains per yard	--	--	610	610
Speed.....yards per minute	--	--	47	47
Roll settings (center to center):				
First to second.....inches plus fiber length 1/	--	--	4/16	4/16
Second to third.....inches plus fiber length 1/	--	--	7/16	7/16
Third to fourth.....inches plus fiber length 1/	--	--	10/16	10/16
5. COMBER (Model D-4)				
Standard atmospheric conditions:				
Temperature.....degrees F.	--	--	75	75
Relative humidity.....percent	--	--	60	60
Laps fed, 8 each.....grains per yard	--	--	610	610
Sliver delivered.....grains per yard	--	--	50	40
Production per hour.....pounds	--	--	16	13
Setting of cushion plate to detaching roll.....inches	--	--	.48	.54
Nominal waste.....percent	--	--	16 to 17	16 to 17
6. DRAWING FRAME (synthetic top rolls)				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
First process:				
Sliver fed, 6 each.....grains per yard	50	50	50	40
Sliver delivered.....grains per yard	60	53	53	42
Second process:				
Sliver fed, 6 each.....grains per yard	60	53	53	42
Sliver delivered.....grains per yard	70	55	55	44
Speed.....yards per minute	36	36	36	36
Roll settings (center to center):				
First to second.....inches plus fiber length 1/	4/16	4/16	4/16	4/16
Second to third.....inches plus fiber length 1/	7/16	7/16	7/16	7/16
Third to fourth.....inches plus fiber length 1/	10/16	10/16	10/16	10/16
7. LONG DRAFT ROVING (8 x 4, 2 apron type)				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
Sliver fed.....grains per yard	70	55	55	44
Roving delivered.....hank	1.10	1.80	1.80	4.25
Spindle speed.....r.p.m.	1235	1235	1235	1235
Roll settings (center to center):				
First to second, standard.....inches	2-1/4	2-1/4	2-1/4	2-1/4
Third to fourth.....inches plus fiber length 1/	1/4	1/4	1/4	1/4
8. LONG DRAFT SPINNING (2 apron type)				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	65	65	65	65
Roving fed single.....hank	1.10	1.80	1.80	4.25
Twist multiplier.....number	4.4	4.0	3.8	3.6
Carded yarns.....number 2/	8s & 22s	22s & 50s	22s & 50s	--
Combed yarns.....number	--	--	22s & 50s	50s & 80s
Spindle speed.....r.p.m. 3/	9000	9000	9000	9000
Roll settings (center to center):				
First to second, standard.....inches	2-1/16	2-1/16	2-1/16	2-1/16
Second to third, standard.....inches	1-3/4	1-3/4	1-3/4	1-3/4

2/ Additional yarn is spun on a 96 spindle wide gage frame at 9,000 r.p.m. spindle speed to determine the spinning potential yarn number or the finest yarn number that can be spun without end-breakage.

3/ All standard yarn numbers are spun on narrow gage frames with spindle speeds of 9,000 r.p.m. except for 8s, which are spun on a wide gage frame with spindle speed of 5,500 r.p.m.

